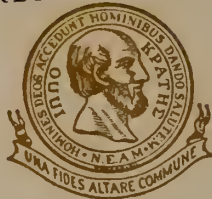




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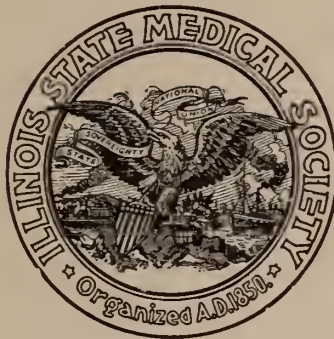
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INDEX TO VOLUME LI

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# INDEX TO VOLUME LI

JANUARY TO JUNE, 1927

This is an alphabetical index of articles and discussions arranged by leading words. It contains occasional cross references. Names of authors and men who discussed the papers are also included. Details of society proceedings, including the titles

of papers read, officers elected, etc., can be located in proceedings under Societies, Editorials, News of the State, Marriages, Deaths. The subjects of editorials also appear alphabetically and are marked (E).

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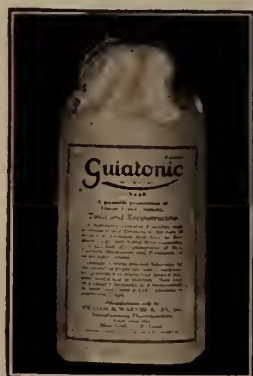


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# ILLINOIS MEDICAL JOURNAL

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## Editorial

### HAPPY NEW YEAR

### THE PRICE OF LIBERTY IS ETERNAL VIGILANCE

The ILLINOIS MEDICAL JOURNAL and its editor, speaking for the medical profession of the state, extend to all patrons of the magazine the most heartfelt wishes for a year of prosperity and happiness.

As for the profession itself the best that the year could bring is relief from the handicapping legislation that now makes of the practice of medicine a continual conflict between a man's personal and scientific consciences. As matters stand now in only too many instances a doctor finds himself both caught by the devil and drowning in the depths of the deepest seas. It is a case of "Hang if you do, and hang if you don't."

With the tremendous advance in medical research at no little physical and financial sacrifice on the part of physicians for the benefit of civilization, it would seem that the least repayment civilization might make to the medical profession would be the right to afford among ethical doctors some liberty of conscience and opinion.

If civilization shirks its duty and if the only way to this essential state to be obtained is through the ballot, and through organization of the profession into a unit that will strike against interfering legislation through incompetent legislators, then let it be hoped and prayed for that this coming year will bring such affiliation.

Apropos of the general trend towards socialization of medicine it must be emphasized that such a condition means an inferior medical service for the sick.

Another evil that must be fought more strenuously than ever is the practice of medicine by corporations. "Big business" has discovered the possibility of further exploiting the public for a profit at the expense of the public health. Extension and development of this phase of destruc-

tive delusion means the annihilation of competent medical service to the public at large.

Also many religious and sociological organizations are attempting to give medical aid through a third person. This cannot be done efficiently. Hence here is still another assault against the public health through a distressing campaign against which it is the duty of the doctors to warn the people and to lead a counter-attack.

The year 1926 was a most excellent year in many respects. Gradually postwar hysteria is being absorbed by the sanity of everyday routine. Adherents of socialism in medicine are not asleep however, and their insidious doctrine are disseminated daily. "The price of liberty is eternal vigilance." Realization of this must be borne in mind by the medical profession and for the sake of public welfare as well as loyalty to the mother science the coming year dare find no relaxation in the effort to uphold the rights of the medical profession, both as a science and for individuals.

There can be no trafficking with justice. Remembering this, let no one member of the profession sit idly by and see the ideals of this greatest of human sciences bear any spot or tarnish.

That all the "back bills" may be collected and that mortal sorrows may be minimized in the household of every doctor and that peace, health and prosperity may abound in the New Year is the wish of the JOURNAL and its editor.

---

#### ADULT INFANTILISM LATEST CHARGE AGAINST AMERICANS SEEMS NOT ALTOGETHER UNFOUNDED, AS A CRITICISM OF NATION OF VIOLENT EXTREMES

MISONEISM OF HUMAN RACE AS DEFINED BY  
LOMBROSO IS THE NATURAL GYROSCOPE THAT  
WILL SAVE THE HIGHER CIVILIZATION

Max Nordau writing more than thirty years ago on the degeneration of civilization epitomized this decadence and hysteria as the three tendencies of "mysticism, ego-mania, and false realism."

What Nordau classified as ego-mania in a critique directed against civilization at large, appears now, revamped and "made in America" as "adult-infantilism" and in a specific charge against inhabitants of The United States. Nor is the indictment unjustified.

There are of course various differentiations but

these are of minor species, rather than of genus. In 1892 Nordau wrote, "We stand now in the midst of a severe mental epidemic; of a sort of black death of degeneration and hysteria, and it is natural that we should ask anxiously on all sides: 'What is to come next?'"

Dr. Joseph Collins, following in the Nordau woods, writes an imitative and controversial book, "The Doctor Looks at Love and Life," returning within its covers the indictment that "America has fallen prey alarmingly to a disease diagnosed as 'adult-infantilism.'"

Nordau in his bill of findings remarked of the "Big Three" of degeneration that

"In all three tendencies we detect the same ultimate elements, viz., a brain incapable of normal working, thence feebleness of will, inattention, predominance of emotion, lack of knowledge, absence of sympathy in the world and humanity, atrophy of the notion of duty and morality. From a clinical point of view somewhat unlike each other, these pathological pictures are nevertheless only different manifestations of a single and unique fundamental condition, to wit, exhaustion, and they must be ranked by the alienist in the genus melancholia which is the psychiatric symptom of an exhausted central nervous system.

"Hysteria and degeneration have always existed. Formerly they showed themselves sporadically and had no importance in the life of the whole community. It was only the vast fatigue which was experienced by the generation on which the multitude of discoveries and innovations burst abruptly, imposing upon it organic exigencies greatly surpassing its strength which created favourable conditions under which these maladies could gain ground enormously and become a danger to civilization."

Since then also the world has had the greatest war of all times and an even greater advance in scientific development than had seemed probable at the time of writing Nordau's masterpiece.

From all of these, and especially American supremacy in finance, invention and manufacturing as well as in agricultural vastness, has come about a cumulus of that personal pride that, displayed with less discretion than our military valor, laid us open recently to the remark by a gentleman of France that not only is "America a nation of violent extremes but the slogan is 'The greatest in the world,' and unless an object



is of its kind the biggest or the most wonderful it is not considered worth while; except a person be the greatest, the strongest, the most successful he is not lauded by the crowd."

Then at his heels comes our American, Dr. Collins, remarking that there are proportionately speaking, "more grown-up infants in America than any place else in the world, parading without shame all the crude boastfulness, self-satisfaction and lack of control common to youth."

"Adult infantilism," continues Dr. Collins, "is the condition and conduct of an individual who having reached maturity of physical development, remains infantile in his responses to the demands and obligations of life. Psychic infantilism in adults is characterized by the persistence in adult life of the peculiarities of the infantile psychic state. These peculiarities are weak judgment, over-suggestibility, imaginative-ness, outbreaks of emotional anxiety, exaggerated sensibility, easily induced fatigue, evanescence of emotional states, particularly grief, and in general a trivial or playful attitude toward life. When the psychic development does not keep pace with years and with physical maturation we are justified in calling the individual an adult infant."

"Adult infantilism is our chief deficiency as a people. It is responsible for more maladjustment, more family discord and more intellectual vagrancy than any disease, derangement or other disharmony of mind and body. And the number of people thus afflicted seems to be increasing."

In chapter first, book fifth of "Degeneration," Nordau spoke of an increase in the "ulterior evolution of the evil of degeneration" as "*The lust of murder is confronted as a disease and treated by surgical intervention; on the stage are representations of unveiled eroticism and bloody homicides*:" . . .

"It would be easy to augment this picture still further," writes Nordau, "no feature of which is invented; every detail of which is borrowed from special literature on criminal law and psychiatrics, and observations of the peculiarities of neurasthenics, hysteric and mattoids."

"This even to the prognostication that sexual pscopathy of every nature may become so general and so imperious that manners and laws have adapted themselves accordingly. They appear already in the fashions. Masochists clothe

themselves in a costume that recalls by colour and cut feminine apparel. Women who wish to please men of this kind, wear men's dress. Modesty and restraint are dead superstitions of the past. . . .

"Now these degenerations and hysterics may be in the future the condition of civilized humanity if fatigue, nervous exhaustion and the diseases and degeneration conditioned by them, make much greater progress. Will it come to this?" questioned Nordau. "Well, no, I think not. And this for a reason that scarcely permits of an objection. Because humanity has not yet reached the term of its evolution; because the overexertion of two or three generations cannot yet have exhausted all its vital powers. Humanity is not senile. It is still young, and a moment of over-exertion is not fatal for youth; it can recover itself. Humanity resembles a vast torrent of lava which rushes broad and deep from the crater of a volcano in constant activity. The outer crust cracks into cold vitrified scoriae but under this dead shell, the mass flows rapidly and evenly in living incandescence. As long as the vital powers of an individual, as of a race, are not wholly consumed, the organism makes efforts, actively or passively, to adapt itself by seeking to modify injurious conditions or by adjusting itself in some way so that conditions impossible to modify should be as little noxious as possible. Degenerates, hysterics and neurasthenics are not capable of adaptation. Therefore they are fated to disappear. The normal man with his clear mind, logical thought, sound judgment and strong will, sees where the degenerate only gropes . . . and in possession of all the good things of life the normal man leaves the impotent degenerate at most the shelter of the hospital, lunatic asylum and prison in contemptuous pity. Degenerates must succumb. They can neither adapt themselves to the conditions of nature and civilization nor maintain themselves in the struggle for existence against the healthy. . . . The more vigorous, though at first bewildered and fatigued, recover themselves little by little; their descendants accustom themselves to the rapid progress which humanity must make. Unnumbered millions of men will rapidly adapt themselves to the conditions that new inventions have created for humanity. We will have a generation by the end of the twentieth century that will not find it injurious to read daily a dozen

square yards of newspapers, to be constantly called to the telephone, to be thinking simultaneously of the five continents of the world, to live half their time in a railway carriage or flying machine. It will know how to find its ease in the midst of a city inhabited by millions and will be able with nerves of gigantic vigor to respond without haste or agitation to the almost innumerable claims of existence. If however the new civilization should decidedly outstrip the powers of humanity, if even the most robust of the species should not in the long run grow up to it then ulterior generations will settle with it in another way. They will simply give it up. For humanity has a sure means of defense against innovations that impose a destructive effort on its nervous system, namely, 'misoneism,' that instinctive, invincible aversion to progress and its difficulties that Lombroso has studied so much and to which he has given this name."

"But it must be remembered that whoever preaches absence of discipline is an enemy of progress and whoever worships his 'I' is an enemy of society."

So many of Nordau's prophecies have materialized that it behooves one to discount the grain of salt that must be taken with his optimism.

Dr. Collins in his book has but touched upon a small section of Nordau's mammoth text. That he has put his sentiments into form so that the minds of the adult infants can comprehend the warning is commendable even though it strikes an oddly quizzical note among the hearts and minds of those who have lived to see within the past decade even the simplest of all classics, and the greatest of all books, the Bible, done into current colloquialism and done a little better to their thinking by a score of modern men. A real life of "Paul" is just now begun as a fiction serial in a modern magazine. There is an ancient Jew who talks of the flotsam of State and Madison streets or the county fair at Cairo. So perhaps it is well that in his book Dr. Collins informs us sedately that

"Americans are a restless, dissatisfied, uncultured people. We have more colleges and universities than any country in the world," Dr. Collins argues, "and yet we are the worst educated, the least cultured. We have more churches, chapels and civic centers than any country of Europe, yet we are swayed by religious prejudice that transcends the understanding of Europeans. We have a climate that has no equal, yet we fly from it as though its atmosphere were mephitic.

We have comforts that kings might consider luxuries, yet it is real punishment for us to stay at home; we have wealth and occupation, but little of that peace of mind surpassing wealth which the sage finds in meditation.

"America, as a nation, prides itself on having the biggest city, the tallest buildings, the longest bridges and the fastest automobiles in the world. Dimension, size, weight and speed are the slogans of our country, and they compensate for ideals, art, for true greatness.

"We are constantly shifting our viewpoints, seeking new occupations, unfamiliar horizons, different pleasures, because we have little focusing power. A passing idea attracts our attention, but we cannot concentrate on it—we are too afraid that meanwhile another idea may go unnoticed.

"Forty years ago the rage was roller skates. The country was dotted with roller-skating rinks. A short time later we nearly forgot how to walk in our enthusiasm for bicycles. It was no uncommon sight in New York on a Sunday morning to see thousands riding up and down Broadway and Riverside Drive. Then came the automobile; and it is a poor man indeed who cannot take his family out on week-end motor trips. A few years ago mah-jong swept the country; its career, however, was cut a little short by the entry of the cross-word puzzle. There are still people who diligently work cross-word puzzles, especially on suburban trains. But for the most part, we are so absorbed in 'listening in' to cheap music and cheaper wit that we have no time to loaf and invite our souls.

"Who has not seen at one of the big football games an elderly, dignified-looking gentleman scale the ram-parts, grasp a megaphone and lead the cheering? His emotions will no longer tolerate repression. He is a boy again, and glad of it. And he is one of the great army of adults who regard such games seriously. We aver that football engenders courage, teaches fair treatment of opponents, develops backbone and will-power, which is all buncombe. It does not do any of these things. Fewer heroes are recruited from football fields than from factories, and the man who displays signal courage or bravery when it is called for is more likely to have spent his spare time reading Keats and Baudelaire than charging upon the grid-iron and breaking opponents' ribs.

"When Americans play they bring to their games, of whatever sort, a dignity and soberness that children have when they play 'father and mother,' or we go to the other extreme—adult-infantilism being composed mostly of extremes of one sort or another—and display a jovial exuberance and enthusiasm which is neither becoming nor really felt. These are typical childish traits. There is a process of adjustment or of unconscious rationalization that takes place in the mind of the 'player' and influences his attitude, for it is no rare thing to see an American man who in his own country carries his mask of sobriety to the golf links become boisterous and garrulously gay when on the links at Cannes, Le Touquet or Inverness. And we are so susceptible to external influence, so inclined



to believe that the right word is the last one spoken! Americans will succumb to anything, reasonable or otherwise, if it is sufficiently advertised. They will overstep any limit, too, if the bait is fashionable or popular. We have had more 'crazes' and 'fads' in our country in the past fifty years than any other country can boast of in twice that time. Americans like to imitate—to copy someone else. We worship the golden calf and follow the bell cow. Being one's self is a besetting American sin. The girl whose lisp is 'too cute for words' plays at being a child 'when she is old enough to have one of her own.' Take politics seriously? No, that Americans do not do. To follow the trend and achievements of the country requires maturity of mind, which involves emotional maturity. That is what we lack. The happy-go-lucky attitude is so much easier. We would rather play golf or go to a football game than vote and we cannot take the time from radios and movies to inquire into the merit of constitutional amendments. We moral men and true, find it much easier flagrantly to break the law prohibiting the manufacture and sale of alcohol than we do to co-operate in getting it changed or modified so that we, moral men and true, can face ourselves as such in the mirror.

"Laws forbidding the manufacture and sale of liquor may be passed—as many laws as one likes. The national treasury may be drained to its last dollar in an effort to enforce such laws. All the army, navy, state, county and municipal officers may be enlisted in a campaign to see that these laws are observed. But until every roof in the land is lifted and every residential wall razed, alcohol will be obtained, manufactured and drunk. Why this determined resolution to drink when to drink is forbidden? The answer is inextricably entangled in the question. The way to make man drink is to have another man tell him he must not. Hence thousands, probably millions, who a few years ago had small inclination to take alcohol now have an urge to do so which they coddle.

"It is easy enough to prove that the revolt against all things that are 'verboten' derives directly from childhood. Thus is the thesis upheld and another evidence of adult-infantilism produced.

"To me it seems that we are planning and fabricating a new Dark Age \* \* \* We have American tradition and American ideals upon our lips, but graven upon our heart is prejudice, intolerance, bigotry \* \* \* We say that we have carried and still carry the torch of liberty; yet, year by year, we restrict increasingly man's conduct by legislation. We say that we are idealistic, but by word of mouth and by example we strive to convince ourselves that it is more important to succeed than to live. \* \* \* We are satisfied with ourselves and with our neighbors who agree with us and who conform their conduct to ours; but we are dissatisfied with all others and determined to make them mend their ways.

"Why all this? Why this omnipresent instability, this spirit of up-and-down, of wrong-headedness? It derives from the fact that so many of us are emo-

tionally infantile. And Americans of today are justified in charging with neglect their parents, who are responsible for the present infirmity. Had they treated us wisely, or even fairly, we should be able to follow in the footsteps of their forebears and grow up into men and women of balance, of maturity, of poise, like the men who toiled to transform us from a group of colonies into a nation. Why do the mental equipment and emotional endowment of the present generation show themselves lacking when drawn into comparison with qualities distinguishing the past? There is scarcely a man in this country, with one notable exception, who is carrying on as his distinguished father or grandfather did in lighting the world, in building its railroads, in diversifying its commerce, in transforming our resources into capital. There is reason for this. Parents in their love and in their imbecility have thought it made for the welfare of their sons and daughters to spare them the trials and hardships that they themselves endured.

"It is the way the past generation has brought up its children, spiritually and materially, and the way the present generation is bringing up its own that is responsible for our personal and national infantilism. The care that wealthy parents expend upon their children is love's labor lost. Parents and teachers pay as little attention to their children's emotional development as they do to their vocalization or their carriage—that is, none at all. They do not attempt to inform them about the influences that they must support at the onset of maturity, of the axes they must grind, of the fences they must repair. Then they are astonished that their children do not realize that 'beauty is truth, truth is beauty,' and that they do not speak melodiously, walk gracefully, mature harmoniously and carry on effectively.

"Our bell-cows should be slaughtered and the bells melted. The young should be taught how to think. Thought is the expression of power in its highest and noblest form. It is the enemy of privilege, the friend of mercy, the proponent of justice."

In his teaching it is not amiss to recall another warning of Nordau. "We must resolutely set ourselves in opposition to the miserable mongers who seize upon the dearest watchwords of sane thinkers to entrap the innocent. The 'freedom,' the 'modernity,' the 'progress' and the 'truth' of those fellows are not that of normal men. They have nothing in common with the thoughts of the normal mind. For they wish for self-indulgence. We wish for work. The emancipation for which we are striving is of the judgment, not of the appetites. In the profoundly penetrating words of Matt. v. 17, "Think not that I come to destroy the law or the prophets; I am not come to destroy, but to fulfil."

## ANNUAL MEETING OF THE AMERICAN COLLEGE OF PHYSICIANS

Announcement is made that The American College of Physicians will hold its Eleventh Annual Clinical Session at Cleveland, Ohio, February 21-25, 1927. Dr. Alfred Stengel of Philadelphia is President of the College and Dr. John Phillips of Cleveland is the Chairman of the Program Committee. The program will be of unusual interest to Internists (including Neurologists, Pediatricists, Roentgenologists, Pathologists, Dermatologists, Psychiatrists and others engaged in the field of Internal Medicine). The Cleveland hospitals and the Western Reserve University will co-operate with the College in the presentation of the program. These programs constitute each year a post-graduate week on Internal Medicine of outstanding merit.

During the mornings, there will be clinics and demonstrations at the various hospitals and in the laboratories of the Western Reserve University; during the afternoons, papers on various medical topics will be delivered by local members of the profession and by members of The College from other parts of the United States and Canada; during the evenings, there will be formal addresses by distinguished guests, American or foreign, and by the President or other representatives of The College.

The American College of Physicians is a national organization in which Internists may find a common meeting ground for discussion of the special problems that concern them and through which the interests of Internal Medicine may have proper representation. Membership in this organization is limited to those in the field of Internal Medicine. While it is not a limited national society of specialists (mostly prominent medical teachers) it is not co-ordinal with large national or sectional organizations of physicians requiring no special professional qualifications. Its standards are high and many men of distinction in the profession are numbered among its members.

An invitation has been extended by The College to all qualified physicians and laboratory workers to attend the Cleveland Clinical Session. An attendance in excess of fifteen hundred is anticipated.

## ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR THE STUDY OF GOITER

The Annual Clinical Meeting of the American Association for the Study of Goiter will be held in Philadelphia January 31 and February 1 and 2.

The forenoon clinics will be at the University of Pennsylvania Medical School by Doctors Frazier, Pepper, Stengel, Pancoast, Spiller and Chevalier Jackson.

The scientific program will be given in the assembly hall of the Bellevue Stratford Hotel in the afternoons.

Doctor Emil Goetsch of Brooklyn, New York, is the president, and Doctor Kerwin Kinard of Kansas City, Missouri, is the corresponding secretary.

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## EXCURSION FOR THE CENTRAL ILLI- NOIS CLINIC CLUB

The Central Illinois Clinic Club plans to make their annual clinical excursion to the East, leaving Chicago Saturday night, January 29.

On Monday and Tuesday in Philadelphia the members will have the privilege of attending the clinics and meetings of the American Association for the Study of Goiter, as well as the other clinics in Philadelphia. Clinics have been arranged for in Brooklyn on Wednesday, New York City on Thursday, Baltimore on Friday and Washington, D. C., on Saturday.

Arrangements for the tour are being made by Doctor Don Deal of Springfield, Illinois, and by Doctor E. P. Sloan of Bloomington, Illinois.

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## NOTICE OF EXAMINATION FOR EN- TRANCE INTO THE REGULAR CORPS OF THE UNITED STATES PUBLIC HEALTH SERVICE

Examinations of candidates for entrance into the Regular Corps of the U. S. Public Health Service will be held at the following named places on the dates specified:

At Washington, D. C. . . . . February 7, 1927  
At Chicago, Ill. . . . . February 7, 1927  
At New Orleans, La. . . . . February 7, 1927  
At San Francisco, Cal. . . . . February 7, 1927

Candidates must be not less than twenty-three nor more than thirty-two years of age, and they must have been graduated in medicine at some



reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written, and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President, with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon General, U. S. Public Health Service, Washington, D. C.

H. S. CUMMING,  
Surgeon-General.

### THE CHICAGO MEDICAL SOCIETY AND THE NURSING PROBLEM

At the December meeting of the council of the Chicago Medical Society held Tuesday evening, December 14th, 1926, the following report and resolution covering the nursing situation was adopted:

Special Committee to Study the Nursing Situation: Dr. Chas. E. Huniston presented the following report:

For the purpose of this study and report, hospital patients are divided into three classes, namely:

I—The general run of medical, surgical and obstetrical cases.

II—Patients whose illness is such as to require more than ordinary nursing attention.

III—Patients whose condition is such as to demand practically constant attention.

The nursing needs of these three classes of patients may be stated as follows:

I—The reputable hospitals of Chicago through their "general duty" nursing are rendering adequate service to all patients in this class. Special nursing here is a luxury and not a necessity.

II—One full-time graduate nurse can without hardship give the required additional attention to patients in this class, provided she be allowed proper time off for recreation and sleep.

III—Patients in this class require two nurses, each on half-time.

For the further purposes of this study and report, the committee again divides all hospital

patients into three classes, this time the division is based on the economic status.

I—The very poor, charity cases.

II—The well-to-do, the rich.

III—People of moderate means, the wage earners, the great middle class who are accustomed to pay for what they have, but are compelled by their financial limitations to forego many things they and their families feel are legitimate needs. This class is estimated to constitute 85 per cent of our hospital population.

Class I—The paupers are provided for at public expense and patients here receive the best of medical and nursing attention.

Class II—The rich are abundantly able to take care of themselves.

Class III—The middle class merits our attention. This class of patients find the mounting cost of hospital service most burdensome. It is to be noted that the "mounting" is most conspicuous in the item of special nursing.

Only a few years ago the compensation of a graduate nurse was \$25.00 a week and more than one nurse to a patient was exceptional. Today the compensation for half-time duty has been fixed by the graduate nurses at \$7.00 a "day," which places the cost of full-time attention at \$98.00 a week, and when the cost of the Nurses' board is added, the total for full-time attention stands at \$119.00 a week.

The committee finds that the demand for special nursing in the Chicago hospitals is to a considerable degree artificial. The emotional stress and strain which sickness creates make it easy to sell special attention of any and every kind. If the amount of special nursing were to be determined by the patient's condition of sickness and by that alone, instead of constituting near 40 per cent of the nursing service in the Chicago hospitals, it would drop below 20 per cent.

Since the graduate nurses through their organization have decreed shorter hours and higher pay, it becomes the duty of the medical profession in the interests of the sick, to intervene.

It is a matter of common knowledge that one graduate nurse in charge of just one patient, in a case of only average severity, is really busy only a part of her time. She is "on call" rather than "on duty," and after giving her patient all and every necessary nursing attention, there is time for the easy chair, the latest novel and

considerable visiting. From the patient's standpoint, this is as it should be were only the illness considered, but usually another form of disability obtrudes itself upon the patient, and that other distress is a sick pocketbook.

In the light of a full investigation of the matter of special nursing as it obtains in the hospitals of Chicago, the committee, omitting for the present, reference to the educational problems involved, makes recommendations which concern the two most urgent features of the question, namely, hours and compensation.

These recommendations are:

I—Full-time or 24-hour special duty as it exists in nearly all the Chicago hospitals should be continued.

II—Half-time, or 12-hour duty for all cases of severe illness should be continued.

III—Group nursing, which in this study and report is defined to mean two or more patients under the care of one graduate nurse on half-time or 12-hour duty, should be established.

The "group nursing" here contemplated does not necessarily require that the patients making up the group must be in one and the same room.

The compensation for group nursing should not be greater than that for full-time service to one patient.

The group plan can be made available to patients in either of two ways.

I—The hospital may provide the service through graduate nurses in its own employ.

II—The hospital may arrange the groups and the patients of the groups deal directly with the nurse.

The committee recommends the group plan as a cure for the present high cost of special nursing and this brings about the shorter hours and higher pay which the nurses are demanding. The only concession required of the nurses is that they be reasonably busy while on duty.

In order that the foregoing recommendation shall have force and effect, the Committee offers the following resolution:

Resolved, That the Council of the Chicago Medical Society request the trustees forthwith to institute and maintain a Registry for Nurses; and be it further

Resolved, That the privileges of the said registry be limited to graduates of training schools deemed reputable and in good standing by the Chicago Medical Society.

Resolved, That the privileges and benefits of this registry shall be restricted to such reputable graduate nurses as express their willingness to accept *full-time*, *half-time* or *group plan* assignments, as the nature of the case, in the judgment of the attending physician, may require.

#### A SURVEY OF MEDICAL CHARITY IN CHICAGO TO BE MADE

The abuse of medical charity in Chicago has reached an alarming stage. The extent of the abuse is to be definitely determined by survey under the auspices of the Chicago Medical Society.

At the December 14, 1926, meeting of the Chicago Medical Society the following preamble and resolution was adopted:

Whereas, at the present time there is no authentic data and unprejudiced information regarding the status of facilities, activities and services for the care of the sick in the City of Chicago and Cook County, taking into account their sufficiency or insufficiency, their ethical, economical, efficient and other conduct, and

Whereas, data and information of this character is essential to proper determination of support to be given by professional and lay organizations, institutions or enterprises for the care of the sick, and

Whereas, the members of the Chicago Medical Society stand ready to contribute their services to such worthy enterprises to the end that the health interest of the people may be fully and properly safeguarded, and

Whereas, there is in progress at the present time a survey of the public health activities of the City of Chicago, both official and unofficial, conducted by the American Public Health Association on invitation of the local health authorities, and

Be It Resolved, that the Chicago Medical Society authorize its President and Secretary to appoint a committee with power to effect such arrangements as it may deem advisable, to promote and conduct a survey of the character deemed essential, and

Be It Further Resolved, that the Committee shall seek the co-operation of such other organizations as it may deem proper in this undertaking, and

Be It Resolved, that the Council request the Board of Trustees to authorize the Officers to



make the necessary expenditure of money to carry on this work.

The following committee was appointed: Drs. R. R. Ferguson, Wm. Allen Pusey, Frank Billings, M. L. Harris, J. H. Walsh, Chas. J. Whalen and Frank R. Morton.

THE NURSE FROM THE LAYMAN'S  
VIEWPOINT

The nursing problem throughout the United States has reached an acute stage. The seriousness of the situation has appealed alike to the ailing sick and the medical profession. As viewed from the layman standpoint we call attention to the following editorial which recently appeared in the *Philadelphia Record*:

THE LADY WITH THE LAMP

In these skeptical days, no profession, business, or vocation is immune from inquiries as to its efficiency, adequacy, and general fitness in the scheme of things. Every human activity, from politics and preaching to housekeeping and hod-carrying, is subjected intermittently to analytical examination and appraisalment. At the present moment, we note, the trained nurse is under scrutiny, and is faring rather badly. At least the Rockefeller Foundation reports that "animated and sometimes excited discussion busies itself with questions of her training, her qualifications, her fields of work, her hours, pay, motives, and attitude."

The essence of the criticisms seems to be that the modern trained nurse has lost a good deal of the bloom of the Florence Nightingale romantic tradition; that she is no longer the gentle ministering angel of legend, but an exceedingly businesslike, professional person with rather peremptory ideas concerning her own importance, dignity, prerogatives, and value, and not wholly innocent of instincts for—well, profiteering.

Physicians, says the report, find her "too often over-trained in theory, unduly professionalized, lacking in practicality and docility"—which means, apparently, a lack of submissive deference to medical authority. Yet there are, in truth, many cases in which the man of science can only watch and advise, and it is the woman with the spotless uniform and the steady eyes and hands who must go down into the valley of the shadow and lead the sufferer back.

Hospitals cherish a grievance against the nurse because, after they have trained her, she deserts the wards for more profitable work in school nursing, industrial hygiene and public health activities. Families complain of high charges, limited hours of service, a dictatorial demeanor, and a lofty disinclination to help in smoothing the domestic tasks of a disordered household. Many families of moderate means, indeed, find the services of a trained nurse no longer within their reach.

On her side, the nurse can and does make spirited

answer that in view of her long, arduous, and costly training she is entitled to the status and remuneration of a competent professional. While her hospital experience is a valuable asset, she feels that she has paid for it by services rendered for small compensation, and that when graduated she has every right to seek a better market for her knowledge and abilities.

Anyway, the problem of procuring more and cheaper nurses is important and complex, and study of it has been taken up seriously by committees including physicians, nurses, and laymen. Many observers believe that the best solution would be the classification of nurses into several groups graded according to educational qualifications, experience, and technical training, so that patients might be able to procure help fitted to their varying needs and financial capacities.

SCIENTIFIC SERVICE COMMITTEE  
REPORTS PROGRESS

In response to a questionnaire sent out recently to physicians of McLean and surrounding counties by Dr. Frank O. Deneen of the Sloan Clinic, Bloomington, the following replies were received indicating the first choice of these physicians in scientific meetings:

Clinics .....	33%
Clinics and round table discussions.....	25%
Papers and discussions.....	7%
Round tables .....	7%
Combination of above three.....	4%
Small group clinics.....	2%
Procedure as formerly in Tri-State.....	2%
Clinics and papers.....	1%
Miscellaneous subjects .....	7%

Dr. Deneen comments:

"From the above return on the questionnaire, we must draw the conclusion that the men prefer clinics and round table discussions, with only a small per cent preferring papers. It is also my opinion that if we can get this form of meeting developed that we can interest all of the local men in taking an enthusiastic part in the meetings.

It is rather interesting that in response to this questionnaire we received about 25 per cent replies, which is just slightly higher than the per cent of replies received from questionnaires sent out on matters of public interest from such sources as the *Literary Digest*.

Throughout all of the replies the men voice the sentiment that these clinics and round table discussions and papers be given by somebody outside the local society, and that they confine themselves to subjects with which the general man is in almost daily contact."

These findings of Dr. Deneen give added weight to the decision of the Scientific Service Committee to stress the clinical aspect wherever possible in presentations before county and district medical societies. This will require co-operation from the society requesting service, but will abundantly repay them for the additional effort.

Since the last issue of the ILLINOIS MEDICAL JOURNAL, a revision has been made in the subjects offered by the divisions of internal medicine, under the chairmanship of Dr. W. H. Holmes of Chicago; and the division of surgery under the chairmanship of Dr. Don Deal of Springfield. Following is the group including additions, for which acknowledgment is owing to the courtesy and co-operation of Doctors Don Sutton, J. G. Carr, A. A. Goldsmith, G. F. Thompson of Chicago, Andy Hall of Mt. Vernon, and H. C. Moss of Carbondale:

#### INTERNAL MEDICINE

1. Peptic Ulcer  
Gastric—duodenal  
Diagnosis—treatment  
Medical—surgical.
2. Gall Tract Disease  
Diagnosis—prognosis—medical treatment.
3. Diabetes  
Diagnosis—management.
4. Respiratory Infections  
Influenza  
The pneumonias  
Common colds.
5. Cardio-vascular Disease  
Diagnosis and treatment of early heart failure—of advanced heart failure.
6. The Nature and Significance of Cardiac Murmurs—of Cardiac Pain—of Cardiac Irregularities.
7. The Prevention of Cardiac Disease.
8. Kidney Disease  
Simplification of nomenclature and classification, clarifying nephritis and nephrosis  
Diagnosis—treatment.
9. Goiter  
Simple classification  
Treatment of various types—medical, iodine, surgical  
Brief diagnosis of types.
10. Jaundice.
11. Headache.
12. Cyanosis.
13. Dysnea.
14. Edema.
15. Constipation.
16. Diarrhea.
17. Cough.
18. Albuminuria.
19. Eruptive Fevers.
20. The Business Side of Medicine.
21. Preventive Medicine.
  - a. Community Sanitation from the doctor's viewpoint
  - b. The profitable practice of the periodical health examination
  - c. Immunizations.
22. Empyema  
General considerations  
Recognition—medical and surgical treatment.
23. The Endocrines in Everyday Practice  
Recognition and treatment of endocrine factors in such usual conditions as common colds, "chronic rheumatism," "rheumatoid arthritis," backache, dysmenorrhea, headache, cardiac disturbances, obesity, nephritis, etc.
24. Medical Management of the Menopause.
25. Focal Infection  
Medical and dental aspects  
Relation to general medicine.
26. Arthritis, from the medical standpoint  
Acute—treatment  
Chronic—diagnosis and treatment.
27. Pyelitis or pyelonephritis  
Symptoms—diagnosis—treatment.
28. Rational Physio-Therapy.

#### SURGERY

1. Diseases of the Gall Bladder  
Including a discussion of their influence on other functions of the body and present day surgical treatment.
2. The Diagnosis and Treatment of Acute Appendicitis.
3. Efficient First Aid Treatment.
4. Surgery on the Thyroid  
Including a discussion of the type of cases, preparation before operation and the best post-operative treatment.
5. Treatment of Shock Following an Injury.
6. The Acute Abdomen  
Findings which may lead to a diagnosis.
7. Treatment of Fractures.
8. Surgical Management of Chest Diseases and Injuries  
Empyema — abscess — gangrene — bronchiectasis — rib fracture — suppurated pericarditis — gunshot and puncture wounds—tuberculosis.
9. Head Injuries.
10. The Surgical Stomach.
11. The Modern Treatment of Cancer.
12. Surgery of the Hand.
13. Indications for Nose, Throat and Ear Operations.
14. Relations of Chronic Abdominal Infections to Degenerative Diseases.
15. Back Pain.

Remember—in writing for service:

Give thirty days advance notice.

State the subject preferred; if possible, give a second choice.

State *where* your meeting will be held, and at *what hour*.



State whether or not there will be facilities for showing lantern slides.

State whether or not you prefer a clinical presentation.

JAS. H. HUTTON, M. D.,  
Chairman, Scientific Service Committee,  
6054 Cottage Grove Avenue, Chicago.

# IT IS A LAUGHING ABSURDITY WHICH PUTS CONGRESS IN THE PRACTICE OF MEDICINE AS A QUACK DOCTOR WITHOUT A DIPLOMA

THE LAW ENTERS THE SICK ROOM WITH THE  
DOCTOR, TAKES THE MEDICINE, A MEDICINE  
DROPPER AND A SPOON AND MEASURES  
OUT WHAT THE PATIENT IS  
TO HAVE

The following from the *Chicago Tribune*, February 22, 1926, is worthy of reproduction because it portrays beautifully the principle involved in Congress attempting to take over and regulate the practice of medicine:

## VOLSTED IN THE SICK ROOM

Senator Hawes of Missouri proposes the amendment of the Volstead act to take out of it the regulation of physicians' prescriptions by the government. The act permits the use of whisky in medical practice, but it limits the prescription to a pint every ten days. That limitation does not consider the patient who needs the stimulant as a medicine, but the person who might use it as a beverage. It says that the sick person, under the care of a conscientious doctor, shall not have more than a pint every ten days in order that the law violator shall find it harder to get a pint every day.

As Mr. Hawes points out, this provision was not in the Volstead act as it was first passed. It was added after the internal revenue bureau had tried to interfere with the issuance of prescriptions. The attorney general told the bureau it had no such authority. The dregs in congress then gave it authority and the Supreme court, by a five to four decision, upheld the provision.

The ostensible purpose of prohibition in the United States is to prevent the use of alcohol as a beverage. It is such use that is declared unlawful and nothing else. The construction which brings the practice of medicine within the power of congress to regulate dosage in this particular instance was satisfactory to only five judges, but they made it the law so long as congress retains it in the act.

Congress can change that by ordinary legislative process, and if it had any sense of congruity it would. It is a laughing absurdity which puts congress in the practice of medicine as a quack doctor without a diploma. The law recognizes the medicinal value of whisky. It recognizes the right of a physician to pre-

scribe it when he thinks it needed, but congress reserves the right to say how much is needed.

The law enters the sick room with the doctor, takes the medicine, a medicine dropper, and a spoon, and measures out what the patient is to have. If the doctor disagrees, he'll have to bootleg the remainder to his patient.

The requirements of hospitals and of sick rooms have no appeal for prohibitionists. They are concerned only with the personal habits of people able to take care of themselves and, rather than that a man should get a pint as a beverage, they would sacrifice the sick.

The restriction on whisky as prescribed by physicians should be taken out of the Volstead act in common decency and the medicinal use of any form of alcohol should be granted. If a sick person needs champagne, brandy, or a malt stimulant it should be possible in any country which considers itself civilized and Christian for him to get it on doctor's orders. The eighteenth amendment prohibits the beverage use of alcohol.

Savagery in prohibition has been progressive. It has been injected into statutes and into regulations, into the practices of enforcement units and the demands of professional prohibitionists. It has considered none of the old protections of life and property. It regards assassination lightly, liberty as nothing, and property as negligible. It would padlock a sick room as readily as a roadhouse, and treat a dying man as a drunken bum.

## Correspondence

### SHEPPARD-TOWNER

Silvis, Illinois, Dec. 13, 1926.

*To the Editor:* I hear tonight that HR7555 is likely to get to the Senate floor this week. And that seems in line with their summer program. Accordingly I have just wired Deneen:

"Illinois legislatures have repeatedly refused the handicap of federal aid in maternity matters. They might have worked under the public health service which is a far different thing from the children's bureau. The Illinois Medical Society still claims the right to speak on matters of health and now begs that the Illinois Senator reverse his attitude of June 15 and vote with Illinois when HR7555 comes before the Senate which we are told may be at an early date."

WILLIAM D. CHAPMAN,  
Chairman of the Council,  
Illinois State Medical Society.

Washington, D. C., Dec. 9, 1926.

*To the Editor:* Please wire and ask your eminent colleagues to wire President forceful objec-

tions to his recommendation of extension of maternity act in budget message published today where he admits act should eventually die but urges extension now. Senate will probably defeat extension if executive pressure can be removed or moderated.

MARY G. KILBRETH.

### THE SHEPPARD-TOWNER ACT IS UP FOR RE-ENACTMENT. WRITE OR WIRE YOUR SENATOR AND REPRESENTATIVE

At the December 14th meeting of the Council of the Chicago Medical Society attention was called to the fact that the Sheppard-Towner Act is up for consideration in the United States Senate. By unanimous vote the Secretary was instructed to wire President Coolidge conveying the information that the Chicago Medical Society oppose the re-enactment of the Act.

The following is the telegram:

President Calvin Coolidge,  
Washington, D. C.

The Chicago Medical Society, the largest local medical society in the world, in session December 14th by unanimous resolution instructed its Secretary to forward his Excellency, the President of the United States, the following telegram:

Chicago Medical Society protests against the extension of the Maternity Act. It is unjustified by any emergency and in the means provided in the act have failed to afford an effective remedy for alleged existing conditions. This destroyer of individual rights and developer of community supervision is a socialistic crime committed in the name of education, and all forgetful of the fact that the problem of reducing maternal and infant death rates is purely a medical problem.

Daubed over with the sophistries of "Federal Aid" and "governmental gifts," the Sheppard-Towner Maternity Bill smirks at the voter and the keepers of the great American home, hoping by the fragrance of synthetic altruism to delude and debauch the greatest bulwark against socialism that the world has ever known.

FRANK P. MORTON, Secretary.

Physicians should write or wire their Senator to oppose extension of the Sheppard-Towner Act. and representatives in Washington asking them The wording of the above telegram outlines in a general way reasons for opposing the Act.

### THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER

December 16, 1926.

#### \$100,000 OFFERED FOR THE CONQUEST OF CANCER

Two prizes of \$50,000 each have been offered by William Lawrence Saunders of New York for discoveries of the causation, prevention and cure of cancer. The offer was made on December 15, 1926, and will stand for three years. The donor expects to renew it, if necessary.

Mr. Saunders is Chairman of the Board of Directors of the Ingersoll-Rand Company, Director of the Federal Reserve Bank of New York and President of the United Engineering Company.

The decision upon which the awards will be made is to be reached by the American Society for the Control of Cancer and approved by the American Medical Association and the American College of Surgeons.

It is Mr. Saunders' idea that discoveries are not always made by experts and that "through the lure of a reward this serious problem might be solved through the genius of a lay mind, by chemists or through unorganized medical sources."

The offer of Mr. Saunders to the American Society for the Control of Cancer has not yet been formally acted upon by the Society, and it is impossible to say at this time what rules other than those proposed by Mr. Saunders will control the decisions. Information as to how persons who wish to present their discoveries for consideration should proceed will be announced later.

Mr. Saunders made his offer known through a letter to Dr. C. N. B. Camac of New York under date of December 13, 1926, and read by Dr. Camac at a dinner given in the interests of the American Society for the Control of Cancer by President Nicholas Murray Butler of Columbia University and Honorable Charles Evans Hughes.

The letter follows:

New York, December 13, 1926.

Dr. C. N. B. Camac,  
76 East 56th Street,  
New York.

Dear Dr. Camac:

I regret that because of a previous engagement, which I cannot well forego, I shall be unable to accept your kind invitation to be present



at the dinner on the 15th inst. in the interest of the American Society for the Control of Cancer.

May I ask you to represent me on this occasion by making the following statement?

I will give Fifty Thousand Dollars (\$50,000) to any person or group of persons who may discover what human cancer is and how it can positively be prevented.

I will give Fifty Thousand Dollars (\$50,000) to any person or group of persons who may discover an absolute cure for human cancer.

The entire sum; that is, One Hundred Thousand Dollars (\$100,000) may be given to the same person or group of persons.

The decision upon which these awards shall be made is to be determined by the American Society for the Control of Cancer and approved by the American Medical Association and the American College of Surgeons.

This proposition shall expire at the end of three (3) years from the date of this letter, unless it is further extended by me. This I hope and expect to do.

What I have in mind is this: Discoveries are not always made by experts. Physicians, like business men, are not always the best research workers. Through the lure of a reward this serious problem might be solved through the genius of a lay mind, by chemists or through unknown and unorganized medical sources.

Yellow fever, for instance has been destroyed through the research work of three obscure Army surgeons—Reed, Lazier and Carroll. As far as I know, no cure for yellow fever has been found, nor is a cure necessary so long as we now know how to control and prevent the disease.

This letter gives only the outline of this proposition, the details of which might be drawn up by the American Society for the Control of Cancer, or by such other persons as they may select.

Very truly yours,

(Signed)

WILLIAM LAWRENCE SAUNDERS.

#### HIGHBROW MEDICAL EDUCATION

Notwithstanding the claims from headquarters that there is no shortage of physicians in the country districts and the assurance that all is well with our medical schools, we are beset with serious misgivings as to the present trend and the future of medical practice. There is no use in glossing over the fact that the study of medicine has become the privilege of the rich—the

poor, the ambitious, and frequently the more capable boy being left out in the cold.

It takes at least seven years to obtain a medical diploma, and one or two more to secure the right to practice. The minimum cost of this medical education, not counting the loss of earnings during that period, is around fifteen thousand dollars. How many can afford it? It is well enough to say that the poor boy can earn some money during his spare time. In the first place, the medical curriculum of the modern school is so crowded with useful and useless, mostly useless, courses that there is little if any spare time left. Besides, it is rather difficult to obtain a part-time job, and if one is secured, the compensation is so small that it covers but a very slight part of the total expenses. In the majority of cases, the boy who works during his semester draws on his reserve of nerve energy, and if he does not break down during his college days, he is left so depleted mentally and physically that he is scarcely in a condition to carry on after graduation. The other aids to the impoverished student, namely, scholarships and loans, need scarcely be mentioned, since they are available to a comparatively small number, are as a rule insufficient, and the loans have the additional drawbacks of saddling upon the young doctor a debt which he is not in a position to pay during the first few years of practice.

The argument is often advanced that despite the almost prohibitive cost of medical education, the annual enrollment is always complete with a long waiting list of anxious students clamoring for admission. This is so; but it merely shows in another way that the country is prosperous and money is plentiful. The overcrowding of our medical schools is on a par with the overcrowding of our streets with automobiles, the mammoth ocean liners with American tourists, or the Philadelphia stadium with people who were willing to pay exorbitant sums to see a prize fight. But how about brain workers, engineers? How many of them can afford to send their boys to a first-rate medical school?

There is another and much less serious phase to this situation. If conditions continue as at present, the medical ranks will be filled with the children of the well-to-do or the commercially successful. Their background, their social environment, and their innate propensities are not likely to be conducive to idealism. Crass commercialism, an ambition for a brilliant "career," a desire for ease and comfort achieved without much effort, are likely to be the actuating motives. A new and much higher standard of living among doctors will gradually evolve. Large and expensive establishments, costly automobiles, chauffeurs, servants, and the usual claptrap of the opulent will become the accepted goal for the young doctor, a goal to be reached as quickly as possible. If free service at the clinics or in the hospital wards, gratuitous attendance on the poor, or unremunerative labor in the laboratory interfere with the attainment of the goal, they will be avoided as useless impediments. The question asked of a doctor will be not how many interesting cases he has studied carefully, or what valuable contribution (the kind that cannot be advertised in the newspapers)

to medicine he has made, but whether he prefers a Cadillac to a Pierce Arrow.

We can visualize a time when this matter of the choice of cars will occupy a prominent place in the discussions of our medical meetings, if for no other reason, because there will be no other medical topic on which the commercially successful doctor will be able to talk intelligently. Yes, there will be another: Whether Dr. X is not a cheap skate to charge only one hundred dollars for a tonsillectomy, when two hundred should be the regular fee; or whether it is not more "scientific" to make an exhaustive laboratory study, including gall-bladder drainage, in every minor complaint, the kind that the old-fashioned doctor relieved by a C. C. pill. Of course, it will not be mentioned that the fee for such exhaustive study should be not less than one hundred dollars and as much more as the patient can be hoodwinked into paying.

Is this picture exaggerated? In answer, we point to what is already taking place in our profession, and with that we rest our case.—*Atlantic Medical Journal*.

#### OUR MATERNAL AND PATERNAL GOVERNMENT

(From "Nation's Business," September, 1926)

If the conscientious mother would prepare her child's school luncheon with the help of the Federal Government, she may get that help from either the Treasury Department, the Department of Agriculture, or the Department of the Interior.

The first named, through its Public Health Service, will furnish her with "Nutrition and Education."

The second, through its Bureau of Home Economics, will respond with "School Lunches."

The third, through its Bureau of Education, will send "Diet for the School Child."

Does the subject of milk for the growing child concern her, she may ask for:

"Milk, the Indispensable Food for Children," from the Children's Bureau of the Department of Labor;

"Milk and Our School Children," from the Bureau of Education of the Department of the Interior;

"Safe Milk, an Important Food Problem," from the Public Health Service of the Treasury Department;

"Milk and Its Uses in the Home," from the Bureau of Home Economics, of the Department of Agriculture.

Or would you learn to protect yourself from deadly carbon monoxide gas in garages, you can turn to the Public Health Service, the Bureau of Mines, or the Bureau of Labor Statistics, and each will gladly send you a bulletin.

Some six government bureaus deal with tuberculosis prevention; three departments and an independent board are working on rural hygiene; four departments and some independent bureaus have an eye on sanitary engineering.

We round up these facts from "National Government and Public Health," written by James A. Tobey and published by the Institute for Government Health. Mr. Tobey's 400 pages are largely an argument for a

central division or department of public health. To us they were more interesting for their striking instances of how government activities multiply and duplicate.

#### NORTH AMERICAN PHYSICIANS ARE INVITED TO VISIT THE CLINICS OF EUROPE AGAIN IN 1927.

In May next year a group of physicians with members of their families from the United States and Canada, under the direction of the Inter-State Post Graduate Medical Association of North America, will sail from New York to visit the following leading medical centers of the Old World: London, Edinburgh, Oslo, Stockholm, Upsala, Lund, Copenhagen, Hamburg, Leipzig, Munich, Strasbourg, Heidelberg, Frankfurt and Paris.

This will be the third year that foreign assemblies have been conducted under the auspices of this organization. Those of 1925 and 1926 were exceedingly successful and of great benefit to the physicians who took advantage of them. No doubt the 1927 assemblies will meet with equal success.

In including Norway, Sweden and Denmark in the itinerary, the Association is offering the profession an exceptional opportunity to visit and study in some of the finest clinics in the world.

The group of physicians will be limited to a number that can be comfortably accommodated in the clinics which will cover the entire field of medical science.

The price of the trip will be kept as low as possible and yet furnish first-class accommodations. It will be between \$1,000.00 and \$1,100.00. All physicians who are in good standing in their State or Provincial Society may register. Further information may be obtained from the Managing-Director, Dr. William B. Peck, Freeport, Illinois, or the Travel Department of the American Express Company, 65 Broadway, New York, N. Y., who have charge of the transportation.

#### AGAINST RENEWAL AND EXTENSION OF THE FEDERAL MATERNITY ACT AS PROPOSED IN THE PHIPPS-PARKER BILL (S. 2696—H. R. 7555)\*

EDITOR'S NOTE: Not only the Maternity Act, but the origin, object, nature, methods and leadership of the Communist Conspiracy for Revolution in America through acts of pretended legislation for "women and children," "labor" and the "farmer" is the subject of the Petition to the Senate herewith presented in part.

The Maternity Act as passed (Public 97—67th Congress; 42 Stat. 135) contains this section:

"Section 12. No portion of any moneys appropriated under this Act for the benefit of the States shall be applied, directly or indirectly, to the purchase, erection, preservation, or repair of any buildings or equipment,

\*From the Board of Directors of The Woman Patriot Publishing Company, 8 Jackson Place, N. W., Washington, D. C.



or for the purchase or rental of any buildings or lands, nor shall any such money or moneys required to be appropriated by any State for the purposes and in accordance with the provisions of this Act be used for the payment of any maternity or infancy pension, stipend, or gratuity."

In short, not only does the Act specifically prohibit the use of one Federal dollar to rent a bed in a hospital, or hire a taxicab, for a needy mother, or the clothing "equipment" to keep a new-born baby from freezing; but it also undertakes to command the States that not even "the smallest part" of the "matched" funds raised by the State, shall be used for any "gratuity" to needy mothers and infants! Every cent is for salaries and "social service."

Your petitioners, desiring to be absolutely fair, invite attention to the fact that the latter part of Section 12—commanding the States not to pay any maternity or infancy pension, etc.—was added by the House Interstate and Foreign Commerce Committee, to prevent the use of this money for Socialist "maternity benefits," after severe criticism, in the Senate and elsewhere of such Children's Bureau propaganda. (See "Maternity Benefit System in Certain Foreign Countries," Bureau Publication No. 57.)

On the other hand, it was the Bureau itself that put in the first part of Section 12, prohibiting the use of the money to purchase, erect, preserve, repair or rent any "buildings or equipment."

The reason for this clause is that the Children's Bureau wanted the money appropriated under the Act (aside from that eliminated "smallest part" for "medical and nursing care" in the original bill) exclusively for "service"—that is, salaries, "investigations and reports," traveling expenses, etc., of bureaucrats, which it would be more accurate to describe as plain graft and "pork"—for professional social workers, rather than "service" to mothers and children.

Dr. Anna E. Rude, Director of the Division of Hygiene, Children's Bureau, made this clear at the first hearing:

"No Federal money apportioned to the States shall be used for buildings, repairs, equipment or rent, the intent being that they shall be applied solely for service." (Senate Hearings, Committee on Public Health on S. 3259, May, 1920, p. 7.)

Mrs. Florence Kelley, the real leader of Children's Bureau legislative campaigns (as may be noted in the Senate Hearings on the Maternity Act in 1921 and the Senate Hearings on the Child Labor Amendment in 1923, where she, rather than the Bureau Chief, led the fight on the closely contested points, and the amendments suggested by Senators) made this "service" demand even more clear as the chief object of the Bill's backers, as will be shown.

Senator George H. Moses of New Hampshire, April 28, 1921, introduced an amendment as a substitute for the Maternity Act (S. 1039).

Whatever may be said of the Moses Amendment from the constitutional lawyer's standpoint (on account of the Federal subsidies involved) the Moses Amendment at least provided real Federal aid for mothers—

instead of social workers. To each county that raised \$5,000 for a maternity hospital, the Moses Amendment proposed to contribute a Federal \$5,000 if the hospital were approved by the county and State Public Health officials. Actual training of women in maternal nursing was also provided, and the Federal administration of the Act was to be in the United States Public Health Service.

Senator Moses, at the time, issued the following statement:

"The so-called Maternity Bill is designed to create jobs, and to procure the circulation of literature accompanied by unwelcome and unwise intrusion into the most intimate of private affairs.

"If the real desire of the proponents of the measure is to give real help to expectant mothers, they should realize that provisions should be made for doctors and not documents, for medical men instead of Meddlesome Matties. Therefore, I have prepared an amendment which will provide for Federal co-operation to establish and maintain hospitals in every court choosing to avail itself of the Federal co-operation which I have outlined. These hospitals can be made real centers for the remedial help which the proponents of this bill affect to be seeking. These institutions will offer care for mothers in child-birth and for their ailing children afterward; they can be made local training centers for nurses, to be selected from the schools, around them will be co-ordinated the activities of the existing charitable organizations, mothers' aid societies, the Red Cross and agencies for child welfare. In these hospitals, practical work will be done and the limit of cost will be fixed. Under the pending bill, no one can foresee the ultimate expense, though its pork barrel potentialities are readily apparent."

Mrs. Florence Kelley, Socialist, lieutenant of Friedrich Engels, etc., who was in charge of the "Maternity Act Drive of 1921" as chairman of the Women's Joint Congressional Committee's Maternity Act Subcommittee, had so much power that the bill of a United States Senator proposing real help for mothers, got no consideration whatever, and was not even printed in the hearings (S. 1039, April 25, Senate Committee on Education and Labor) after this leading Socialist, at the head of the so-called "women's" lobby, denounced it!

Mrs. Kelley declared:

"We have made a study of the Moses Amendment and it seems to us to be an amendment intended to destroy this bill. . . . There are very grave dangers in two of its provisions. You cannot imagine anything worse than the strewing of the counties with unstandardized little hospitals. . . . But there is another thing to aggravate the establishment of little hospitals all over the counties, and that is the proposition to turn out from these little hospitals innumerable armies of nurses with one year's training. . . . It would be a terrible retrogression in regard to the standard of the care of mothers and children in this country, and we cannot afford to regress. . . . Our hope is that this bill will be passed to give them this instruc-

tion, and not to provide for bricks and mortar." (Senate Hearings, April 25, 1921, S. 1039, pp. 136-137.)

A Senator's proposal for maternity hospitals, supervised by county and State Health Boards, and the United States Surgeon General, and for the real training of women, under such supervision, in maternal nursing, was bitterly scorned and ridiculed by this powerful Socialist, as "bricks and mortar" for mothers, while "instruction," "service," "investigations and reports," and salaries for social workers without any medical or nursing training at all, was urged as so necessary that Congress was accused of wishing "to have mothers die" unless it passed Mrs. Kelley's bill!

It did pass Mrs. Kelley's bill—and Senator Moses's bill was not even allowed a place in the hearings, so strong was the imagined political power of a Marxian Socialist at the head of a Woman's Joint Congressional Subcommittee, in 1921. Of real political power—voting strength—Mrs. Kelley and her followers have none, as was demonstrated when the people got hold of her Child Labor Amendment. But so long as Congressmen imagined that every woman voter in the country was wildly backing the Kelley Program, the proposal of a mere United States Senator could get no consideration of its merits!

That is the pity of it all. If the Socialists were outvoting us and overpowering us, there would be some excuse for allowing Socialist leaders to write our Federal laws and proposed Constitutional Amendments.

But they are simply outwitting us, bluffing us, and backing us gradually into Communism blindfolded, by threatening Congressmen with the imagined hostility of a mythical solid mass of women voters whom they pretend to represent.

#### SAVE MOTHERS AND BABIES BY REJECTING MATERNITY ACT

Nothing could better demonstrate the fraud and futility of the Maternity Act than the actual results as to infant and maternal mortality, and the nature of the "testimonials" and juggled statistics now presented in favor of its extension. In the first place, an examination of the "testimonials" will disclose that practically all of them are from State employees whose salaries are paid in part from the Federal funds donated under the Act, and who are employed to administer the joint Federal and State funds. It is hardly to be expected that such persons would bear testimony that might result in cutting off Federal appropriations that contribute toward the payment of their salaries and the creation or continuance of their official jobs!

There is one notable exception to such testimonials. At page 48 of the recent House Hearings on H. R. 7555, January 14, 1926, there is a testimonial which was "written in a foreign language"—and had to be translated—in which a foreign mother, who says she has had 9 children, thanks the State Bureau for sending "such good advice."

It is believed that no private patent medicine company in America could stay in business a week without more and better "testimonials" than are offered for the extension of this Act.

In 19 pages of "testimonials" in the Congressional

Record, April 14, 1926, pages 7254-7273, we fail to find any that are not signed by State officials directly concerned in the administration of the Act!

In addition to such testimonials, the Federal Children's Bureau, January 14, 1926, rushed into a hearing before the House Interstate and Foreign Commerce Committee with a table of early "provisional" figures, to show the "Trend of Infant Mortality in the United States Birth Registration Area by States, 1915-1924," as an argument for extension of the Maternity Act. (House Hearings, page 53.)

The Maternity Act of November 23, 1921, did not go into effect and no payments to States were made under it until May 22, 1922. (Children's Bureau Official Publication No. 137, page 5.)

In 1921, the infant death rate per 1,000 live births was 76.

In 1922 (with the Maternity Act in operation after May in a few States), the rate was again 76.

In 1923, the first full year of Maternity Act operation, the rate increased to 77 infant deaths per 1,000 live births!

Did the Children's Bureau come to Congress admitting this mathematical fact, certified by the official figures published by the Census Bureau?

It did not. It went back to 1915—seven years before the Maternity Act was in operation—when the rate in a smaller registration area was 100; and by presenting early "provisional figures" for 1924, with 8 of the 33 States in the Birth Registration Area missing, it sought to show that the "trend of infant mortality" downwards from 1915 to 1924 was due to the Maternity Act!

The Census Bureau has now completed the 1924 figures for the 33 States in the Birth Registration Area, including all five of the States that have rejected the Maternity Act, but only 28 of the 43 States that have accepted the Act. The remaining 15 States, that have accepted the Act, are not in the Birth Registration Area—so that less than two-thirds of the States co-operating with the Bureau are willing to register infant births and deaths!

Accurate birth and infant mortality registration is the first essential in getting information on infant mortality—one of the things the Children's Bureau was created to do. Yet the Children's Bureau, with full power to require birth and infant mortality registration in the "plans" of States accepting the Maternity Act, has "co-operated with" 15 States in not registering births and infant deaths.

The Census Bureau Division of Vital Statistics—the organization that collects the facts and statistics and does not put out isolated "studies," "investigations and reports" as propaganda for its own extension—carries at the top of every one of its newspaper releases; in red ink:

"Vital statistics goal—Every State in the Registration Area Before 1930—Your help needed."

But the Census Bureau, in its official report on Birth Statistics, issued March 11, 1925, observes:

"No States were added to the registration area in 1923."



That was the first full year of Maternity Act operation!

Yet "birth registration" was one of the most touching pleas for passage of the Maternity Act. Miss Julia C. Lathrop, then Chief of the Children's Bureau, testified in 1921:

"We have incomplete birth registration. . . . The adoption of this law undoubtedly will at once give added urgency to birth registration, which the Bureau has stimulated . . . with the aim of bringing the whole country within the registration area as promptly as possible, and thus making possible prompter service to mothers and babies as a measure of lessening infant mortality. Study and stimulus of the best methods of improving birth registration are the duty of the Bureau under its general law and would be especially timely and important in making the maternity and infancy law effective. (Senate Hearings, April, 1921, p. 18.)

But with full authority to require birth registration, "no States were added to the registration area in 1923"—first full year of the Maternity Act—and the Children's Bureau still "co-operates" with 15 States in concealing birth and infant mortality statistics, because of incompetence, neglect of "the duty of the Bureau," or a desire not to have Congress and the country know all the figures when the Bureau seeks more power and funds.

The provisional figures for 1924 for the 33 States in the Birth Registration Area, just compiled by the Vital Statistics Division of the Census Bureau, show:

INFANT MORTALITY IN BIRTH REGISTRATION AREA (33 STATES)

Births, 1924	Deaths under 1 Year	Deaths Under 1 Year Per 1,000 Live Births
1,908,345	139,533	73.1

INFANT MORTALITY IN 5 STATES THAT REJECTED MATERNITY ACT

	Births, 1924	Deaths Under 1 Year	Deaths Under 1 Year Per 1,000 Live Births
Conn. ....	31,676	2,181	68.9
Illinois ...	137,114	9,745	71.1
Kansas ...	37,929	2,238	59.0
Maine ....	18,411	1,485	80.7
Mass. ....	91,487	6,186	68.9
Total ...	316,617	21,835	69.9

INFANT MORTALITY IN 28 STATES THAT ACCEPTED MATERNITY ACT

(Registration Area with total number of births and infant deaths in 5 rejecting States subtracted)

28 States..	1,591,728	117,698	74.0
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Thus the States rejecting the Maternity Act have a lower infant mortality than the States accepting the Act. Infant mortality rates for the individual States accepting the Act that are in the Registration Area are shown in the full Census report "Birth Statistics, 1924."

The 28 States accepting the Act that are in the Registration area follow:

California	Montana	Rhode Island
Delaware	Nebraska	South Carolina
Florida	New Hampshire	Utah
Indiana	New Jersey	Vermont
Iowa	New York	Virginia
Kentucky	North Carolina	Washington
Maryland	North Dakota	Wisconsin
Michigan	Ohio	Wyoming
Minnesota	Oregon	
Mississippi	Pennsylvania	

The 15 States accepting the Act, and co-operating with the Children's Bureau is not registering births and infant mortality, are:

Alabama	Idaho	Oklahoma
Arizona	Louisiana	South Dakota
Arkansas	Missouri	Tennessee
Colorado	Nevada	Texas
Georgia	New Mexico	West Virginia

If infant mortality rates were known in these States, the comparison of rejecting States with accepting States would be even more unfavorable to the Maternity Act, if, as the Children's Bureau itself admits, birth registration makes possible "prompter service to mothers and babies as a measure of lessening infant mortality."

MATERNAL MORTALITY

Likewise, an examination of the figures for maternal mortality shows a greater saving of mothers' lives in States rejecting the Maternity Act.

The latest tables published by the Vital Statistics Division of the Census Bureau are found in "Mortality Statistics, 1923" just issued.

As in the case of infant mortality, they show an actual increase in maternal mortality, both for all causes, and for puerperal septicemia, in the total Registration Area, during the first full year of Maternity Act operation.

The following figures are from Table BH, Mortality Statistics, 1923, page 61—the latest official report of the Census Bureau:

States Rejecting Maternity Act:	DEATHS OF MOTHERS PER 1,000 LIVE BIRTHS					
	All Puerperal Causes.			Puerperal Septicemia		
	1923	1922	1921	1923	1922	1921
Connecticut ..	5.7	5.7	5.3	2.1	2.0	2.2
Illinois .....	6.4	6.3	*	2.7	2.4	*
Kansas .....	6.8	7.6	6.4	3.2	3.3	2.9
Maine .....	8.7	7.6	7.4	1.8	2.1	1.9
Massachusetts.	6.3	6.8	6.5	2.0	2.1	2.2

\*Illinois not in Registration Area in 1921.

All States in Registration Area...	1923	1922	1921	1923	1922	1921
	6.7	6.6	6.8	2.5	2.4	2.7

It is not practicable, except by elaborate calculations from the number of mothers' deaths and live births in all the States, respectively, to determine the maternal mortality rate for the States accepting the Act as a group.

Nevertheless these facts will be observed:

Three of the five rejecting States—Connecticut, Illinois and Massachusetts—have a lower rate for all maternal deaths than the entire Registration Area, proving that the higher rate for the entire Area must come from States accepting the Maternity Act, as Maine and Kansas, with Kansas having only one more maternal death in 10,000 births than the Area, could not alone account for the higher Area rate than the rates of Connecticut, Illinois and Massachusetts.

For puerperal septicemia—the dreaded infection so much stressed by some advocates of the Maternity Act—it will be noted again that three of the rejecting States are below the country average mortality rate; that one, Illinois, is only 2 deaths in 10,000 births above it; and that Maine, despite its comparative high total maternal mortality (due to climate and French Canadian high maternal mortality) has one of the lowest State septicemia rates in the country, indicating that Maine is not “letting mothers die” through this infection by rejecting the advice and subsidies of the Children’s Bureau.

In the table of all the States in the Birth Registration Area, at page 61, it is shown that Connecticut, a rejecting State, has the second lowest maternal mortality rate in America (5.7) only Utah having a lower rate (5.0) and New York and New Jersey having the same rate as Connecticut (5.7).

In the table of cities of 100,000 population or more, at page 62 of the Census Bureau’s Mortality Statistics, 1923, it is shown that Fall River, Massachusetts, has the lowest maternal mortality rate in the Union. (3) and also the lowest septicemia rate (1.1) for any large city or State, without benefit of the so-called Maternity Act.

#### FALSE CHILDREN’S BUREAU STATISTICS

The well known legal principle that a man should not be a judge in his own case applies equally to the accurate and scientific collection of facts and statistics. The Children’s Bureau was established—in the opinion of Congress, at least—as a fact-finding and “statistical agency.”

But the Bureau is self-interested in coloring the facts for its own expansion as an administrative agency; the worse it can show conditions, the better it can demand appropriations to remedy them. This is neither scientific nor safe.

In the original Senate Report (No. 141, 62d Congress, 1st Session, August 14, 1911) by Senator Borah on the bill to establish the Children’s Bureau, are quoted several objections of the Census Bureau to the mixing of statistics with administration, when it was proposed that the Census Bureau could act as the agency. The Director of the Census shrewdly objected:

“The Census Bureau is a purely statistical office. Its function is to collect the cold-blooded facts . . . and leave to the public at large the duty of drawing the ethical or moral or industrial conclusions which those facts convey. I feel very strongly that if any legislation is enacted which in any way modifies the function of the Census Office in that regard it will

be highly detrimental to the work of the office. . . . That is the general position of the Census Office on that proposition, and I believe it is a position which is scientifically correct; that it is a position which it is necessary for the office to maintain if it is not to lose its standing as a purely statistical bureau.”

Thus the fundamental principle of scientific collection of statistics was violated when the Children’s Bureau was created as a “statistical agency” with a direct self-interest in its own statistics.

Naturally, therefore, the Bureau’s statistics have constantly been colored to favor the Bureau’s administrative and legislative plans.

One of its worst and most repeated errors is the publication of charts and tables pretending to show the United States “cares less for mothers and children” than foreign countries. The slogan, “it is safer to be a mother in 17 foreign countries than in the United States,” has been employed in all the Maternity Act propaganda. At the most recent House Hearing, January 13, 1926, Miss Grace Abbott declared:

“The maternal mortality rate is the one that is so seriously high as compared with other countries,” etc., (p. 56).

Assuming this as a fact, she went on to an assumed explanation:

“We have not had the same period during which this has been considered as a national problem that other countries have had. We have been slower in coming to it than some other countries have.” (Ibid.)

Now for the uncolored facts. Dr. John Howland, pediatrician in chief, Johns Hopkins Hospital, Baltimore, one of the most eminent authorities on the subject, wrote to Chairman Winslow of the House Interstate and Foreign Commerce Committee, July 12, 1921:

“I am quite sure from considerable experience with statistics that there is no basis for the statement that the United States stands seventeenth in maternal death rate. Even civilized countries have not sufficiently accurate statistics to enable anyone to make a definite statement such as this.” (House Hearings, July, 1921, p. 270.)

The Vital Statistics Division of the United States Census Bureau—the only real statistical bureau we have on this subject—declares in its latest report, “Mortality Statistics, 1923,” page 61:

“How do the death rates from puerperal causes per 1,000 live births in the birth registration area of the United States compare with the rates in foreign countries? Here again is a question of the greatest interest and importance which cannot be answered satisfactorily both because of lack of data in this country and because there is no certainty that all deaths from these causes are classified in the same way in the various countries.”

According to the most eminent pediatrician in America, and according to the only true statistical agency we have on the subject, “there is no basis” in facts and statistics for this Children’s Bureau propaganda.

But the Bureau is self-interested in making Congressmen believe that the “United States lags behind many



countries" (as the Chief of the Children's Bureau says in her last annual report, for 1925, page 4) and therefore keeps up the propaganda, regardless of the proof that there is no statistical basis for it.

Therefore, even as a "statistical agency," the Children's Bureau is not reliable, and cannot be trusted, as it is not only self-interested, but unscrupulous in juggling statistics to favor its legislative program.

#### SELF-INTEREST OF PUBLIC HEALTH NURSES

In the Children's Bureau's "Minimum Standards for the Public Protection of the Health of Children and Mothers," (Bureau Publication No. 60, p. 437) is this: "One public health nurse for average population of 2,000."

That is, the "minimum standards" of the Bureau contemplate 50,000 public health nurses "for the public protection of the health of mothers and children." According to Miss Elizabeth Gordon Fox, director of the Public Health Nursing Service of the American Red Cross.

"Ten thousand of these public health nurses are scattered over the country." (Professional Nursing as a Career, Woman's Home Companion, April, 1922, page 20).

Thus the Children's Bureau standards provided for five times as many public health nurses, for maternity and infancy work, as there are in the country. It is not remarkable that the Public Health Nursing associations favored the Maternity Act. Miss Fox testified in favor of the Maternity Act in 1920:

"There are something like eighty or ninety thousand nurses in the country and at present only about 10,000 of them are public health nurses; and we could increase their number." (Hearings, House Committee on Interstate and Foreign Commerce, December, 1920, p. 69).

The Children's Bureau standards and the Maternity Act therefore seemed to provide for a public berth for 50,000 out of the 80,000 or 90,000 nurses in the country.

It should be noted that Miss Fox explained to the Committee:

"I would like to have you clearly understand that I do not represent the Red Cross. The Red Cross, as you know, does not take any part in legislation and expresses no opinion on legislative matters, and I do not want my presence here considered to be in behalf of the Red Cross." (Ibid. p. 68.)

Questioned by the Committee, Miss Fox revealed that the "public health nurses" are "largely employed by philanthropic organizations." (p. 76). Relatively few of the 10,000 were on the public pay roll. She said:

"The Red Cross is the largest employer of public health nurses in the country. Outside of the Red Cross there is no other national agency which employs local nurses, except a large insurance company."

It may be observed, in passing, that the Metropolitan Life Insurance Company—the company alluded to—was also a strong supporter of the Maternity Act, and self-interested, of course, in having the salaries of its nurses paid by the public!

Miss Fox testified (page 70):

"We now have 1,200 public health nurses"—meaning in the Red Cross Nursing Service.

In her Woman's Home Companion article, "Professional Nursing as a Career" in April, 1922, (a month before payments began to be made to the States under the Maternity Act) Miss Fox wrote:

"The American Red Cross alone has over thirteen hundred public health nurses engaged in this pioneer rural nursing in every State of the Union."

Under the Maternity Act, "the total number of nurses employed in the States, in addition to the 9 who served as director, was 595." (Children's Bureau Publication No. 146, issued February 11, 1925.)

Your petitioners are informed, by the office of Miss Fox, director of the Red Cross Public Health Nursing Service, that now (May 1, 1926) it has only 854 public health nurses, of which 792 are in the United States, 523 in the Eastern Division, 215 in the Middle West and 53 in the West.

It is evident that the difference between the number of nurses in the Red Cross Public Health Nursing Service, in April, 1922, when there were "over 1,300" and the number employed by the Red Cross at present in the United States, 792, is over 500.

This would seem to indicate that some 500 public Health Nurses previously employed by the Red Cross, have obtained places on the public pay roll under the Maternity Act. The additional 100 Maternity Act nurses may have been recruited from the "insurance company" and the "philanthropic societies."

In any event, it seems clear that the Maternity Act has not increased the total number of nurses "engaged in this pioneer rural nursing in every State of the Union," but simply transferred some 600 nurses from private to public pay rolls! And the Children's Bureau's "minimum standards" contemplate a similar transfer of 50,000 out of the 80,000 or 90,000 nurses in the country—if Congress and the States can be induced to pay the bill.

That this angle of the Act—the socialization and nationalization of nurses—is one of its main bad features is further illustrated in a propaganda article in the May, 1926, issue of "Good Housekeeping."

This magazine was one of the original backers of the Act, and acted as a leader in the Maternity Act campaign. It is owned by Mr. William Randolph Hearst. The article, entitled, "Making America Safe for Mothers," concludes:

"And above all, we must multiply the number of public health nurses a thousandfold." (Good Housekeeping, May, 1926, p. 60.)

Thus while 50,000 public health nurses for maternity and infancy was regarded as the "minimum standard" by the Children's Bureau, the present goal is 600,000, according to Good Housekeeping.

In short, the Maternity Act in part is designed to secure centralized control—by the lay Chief of the Children's Bureau—of practically all the nurses, just as the Federal Education Department Bill is designed to secure centralized control over 800,000 teachers, by the use of catch-phrases, slogans, lobby pressure and juggled statistics upon the Congress.

[Editor's Note: The following article, strikingly confirming the above analysis and showing how "public health nursing" is encroaching upon the ideals of the nursing profession, appeared in the New York Herald-Tribune, June 18, 1926, a month after the petition was presented to the Senate]:

#### NURSE REGARDED AS A PROFITEER, SURVEY SHOWS

Public Believes Trained Ones Devoid of "Nightingale Spirit," Says Rockefeller Foundation Report

A complaining public, physicians and hospital officials believe that the modern trained nurse is a profiteer who has lost the Florence Nightingale spirit of sacrifice and service, says a survey on "The Nurse, the Home and the Hospital," which comprises the second installment of the president's report of the activities of the Rockefeller Foundation. The report was made public yesterday. The nurse, the survey finds, has become the storm center of a serious discussion. The report adds:

"Whatever the solution of the nursing problem, one thing seems certain. There will, in any event be a need for able and thoroughly trained women as administrators, teachers and supervisors. It is this training of leaders in countries in which co-operation in public health or medical attention or both is being given that primarily appeals to the Foundation."

#### THE CASE AGAINST THE NURSE

The case against the nurse Dr. George E. Vincent's report sets forth as follows:

"The nurse plays an essential part in organized public health work; she is indispensable in the teaching hospital. And just now she is a storm center. Discussion, animated, sometimes excited, busies itself with questions of her training, qualifications, fields of work, hours, pay, motives, attitude.

"Physicians complain she is hard to lure to the bed-sides of private patients, that she is too often over-trained in theory, unduly professionalized, lacking in practicality and docility. Families find fault with the amount of her salary, the limitation of her hours and her unwillingness to lend a hand in domestic tasks. Few people of modest means can afford to have her at all.

"The hospitals, too, cherish a grievance. They give her a sound training only to see her desert the wards to do public health nursing, school nursing, industrial hygiene work and the like. Some of the smaller hospitals especially are quite bitter about this exodus.

"One of the most frequent complaints has to do with educational requirements. These are declared to be uselessly high, too theoretical and professional and a chief cause of keeping numbers low and costs high.

"What has the defendant, the graduate registered nurse, to say about these indictments? Here are some of the things she believes ought to be considered. Her education has cost her time and some money—actually a substantial sum if what she might have been earning in other work is taken into account.

#### THE NURSE'S SIDE

"After an elementary school course, and often one or more years of high school, she has spent three years

in a hospital. She thinks that during her period of training the hospital had a good deal of work from her on fairly cheap terms. When she has finished her course she feels that she has the right to choose between continuing in hospital service and entering the fields of private nursing or salaried public health or institutional nursing.

"Fortunately, committees which include doctors, nurses and lay people are beginning to study the problem with open-mindedness and good will. They are making studies of the actual facts; they are considering the classification of nurses into three or even four kinds with appropriate training for each; they are discussing changes in the curriculum, better and more economical organization of nursing service, both in the home and in the hospital, the more effective utilization of public health nurses, and means of making the nursing career more desirable. In all this the Rockefeller Foundation takes a deep interest, but it has no panacea to offer, no special program to impose."

#### MATERNITY ACT PROVES ITSELF FRAUD AND FATAL ERROR

It will be recalled that the Children's Bureau, when fighting Congressional proposals to place Federal administration of the Act under the U. S. Public Health Service, held that it was "not a health measure" and that it would be a "fatal error" to place such work under "the sole supervision of physicians" instead of under a Bureau in the Labor Department. These statements have been quoted in this Memorandum, page 20.

On the other hand, the Bureau and its backers flooded the newspapers and magazines with "sob stuff" propaganda purporting to show that the lives and health of mothers and babies depended upon this Act as a health measure.

Congress was publicly indicted practically as a body of Herods. Mrs. Florence Kelley, for example, in "Mothers and Children Last," "Pictorial Review," February, 1921, denounced Congress for spending "millions for cattle, sheep and swine" and "not a cent" for mothers and babies, etc.

But whenever the much accused Congress, challenged by Mrs. Kelley to explain "Why does Congress continue to wish to have mothers and babies die?" (Senate Hearings, May, 1920, p. 53) sought to save mothers and babies by giving administration of the Act to the U. S. Public Health Service, or by establishing maternity hospitals and maternal nursing schools (as Senator Moses proposed) such suggestions were denounced respectively as a "fatal error" by Miss Lathrop, and ridiculed as "bricks and mortar" by Mrs. Kelley.

Backers of this Act were so much more interested in the capture of power for the Children's Bureau than in the health of mothers and babies, that Congressmen were flatly told they preferred no legislation at all on maternity and infancy unless the Children's Bureau administered it.

Representative Denison of Illinois, said:

"This view . . . has been expressed to me in communications received through the mail, that rather than have the administration of this bill taken from the Children's Bureau, they would rather have no legisla-



tion at all on the subject." (House Hearing, July, 1921, pp. 261, 262.)

Yet this fundamental contention of the Children's Bureau, made to capture the administration of the Act for itself—that it was "not a health measure" and it would be a "fatal error" to place such work under the "sole supervision of physicians" has been proved false by the Maternity Act itself.

The real fatal error—of the Federal Government alone—in placing this health matter under a radical Labor Bureau, has been repudiated and reversed by every one of the States in selecting the State agency.

Of the 43 States accepting the Maternity Act, 41 place its administration under State Boards of Health. Only two—Colorado and Iowa—place it under the State Education Department, and the State University, respectively. (Children's Bureau Publication No. 148, p. 52, List of Administrative Agencies.)

Not a State in the Union places the administration of this Act under a Labor Department Bureau or industrial commission.

Why then should the State Health Boards, in a matter which the Maternity Act itself demonstrates a public health function, be offered bribes by the Federal Government to allow the Federal Children's Bureau to control all their plans for the health of mothers and babies? Because not a State Health Board would submit willingly to the dictatorship of the lay chief of a Federal Bureau of social workers, unless bribed to do it.

The United States Public Health Service, which has been co-operating with State authorities for years in a scientific manner, has never begged Congress to bribe State Health Boards to submit to its control. Instead, Dr. L. L. Lumsden of the U. S. Public Health Service, testifying against this Maternity Act, declared:

"What particular branches of health work are indicated in a given locality must be determined by careful local studies. I can not determine here in an office in Washington . . . how money available for health work can be spent to the best advantage in a given community; that has to be determined by some one on the local job." (House Hearings, July, 1921, p. 224.)

There was the voice of the scientist, the trained public health physician, with over 20 years of experience—showing that under science, health and efficient administration, as well as under the Constitution, the expenditure of public money in this health matter, "has to be determined by some one on the local job." Yet the Maternity Act gives a Bureau of social workers, at their mahogany desks in Washington, the right and power to control all "plans" and expenditures of State Health Boards in this matter that is completely reserved to the States in the Constitution.

#### SOCIALIST PROPAGANDA INSTEAD OF HELP FOR MOTHERS

An examination of the Children's Bureau's publications and activities will show that Bureau from eight to ten times as interested in Socialist "standardization" of children, following European or international models, and in Socialist illegitimacy propaganda, as in the health of mothers and babies. This is shown even in the Bureau's official List of Publications. First, we

count to the credit of the Bureau the publications fairly to be considered within the scope and intention of Congress in creating the Bureau.

In 1912, through the courtesy of an outside physician, as admitted by Miss Lathrop, then Chief of the Children's Bureau (House Hearings, July, 1921, p. 238) a résumé of the book of this physician (Dr. John Slemmons) was issued by the Children's Bureau in one or more pamphlets, credited to Mrs. Max West.

Let us compare these legitimate publications of the Bureau with its foreign Socialist propaganda, using the official Children's Bureau List of Publications, and the Bureau's numbers and titles:

No. 2, Birth Registration .....	20 pages
No. 4, Prenatal Care .....	41 pages
No. 8, Infant Care .....	118 pages
No. 30, Child Care .....	82 pages
10 Dodgers on Child Welfare.....	40 pages
	<hr/>
	301
No. 31 Norwegian Laws Concerning Illegitimate Children .....	37 pages
No. 42, Illegitimacy Laws of the U. S. and Certain Foreign Countries.....	260 pages
No. 42, Analysis & Index of Illegitimacy Laws .....	98 pages
No. 66, Illegitimacy as a Child Welfare Problem (Part I) .....	105 pages
No. 75, Illegitimacy as a Child Welfare Problem (Part II) .....	408 pages
No. 128, Illegitimacy as a Child Welfare Problem (Part III) .....	260 pages
No. 77, Standards of Legal Protection for Children Born Out of Wedlock.	158 pages
No. 144, Welfare of Infants of Illegitimate Birth in Baltimore .....	24 pages

1,370

Is it conceivable that Congress intended the Children's Bureau to compile so much more of this Socialist illegitimacy propaganda than advice and information to mothers in the care of children? In addition, according to the Secretary of Labor's Annual Report, 1925, pp. 73-74, the Bureau is investigating 250 cases of illegitimate children, 8 years of age and over, in 11 cities, and the histories of these cases 250 individuals—"will form the basis of a report now being prepared." Hence, any Senator may soon pick up a Children's Bureau indictment of his home town's conditions, drawing sweeping national conclusions—and "standards" for national legislation—from the cases of 250 unfortunates the Bureau is inspecting.

Again, let us compare the publications relating to the Maternity Act, with those seeking Socialist standardization of American children in imitation of the "doles" and "maternity benefits" systems of Europe.

No. 137, Promotion of the Welfare and Hygiene of Maternity and Infancy...	42 pages
No. 146, Promotion of the Welfare and Hygiene of Maternity and Infancy...	56 pages

98



No. 57, Maternity Benefit Systems in Certain Foreign Countries.....	206 pages
No. 60, Standards of Child Welfare.....	459 pages
No. 76, Infant Welfare Work in Europe..	169 pages
No. 105, Infant Mortality and Preventive Work in New Zealand.....	72 pages
	—
	906

Here we have nearly ten times as much foreign Socialist standardization propaganda, as information from the Bureau regarding the Maternity Act! The "Standards of Child Welfare" (No. 60, 459 pages) is the outcome of an internationalist convention called here by the Children's Bureau to frame legislation for American mothers and children, in 1919. The proceedings and "Minimum Standards" of that internationalist convention have become almost a fetish of the Bureau, to which it constantly compares the real laws of American States as inferior and defective to these "Minimum Standards" of a group of sociologists from England, Canada, France, Italy, Serbia and Japan, etc., which the Children's Bureau brought here at expense of American taxpayers. (These "Standards" are examined at length in the speech of Senator James A. Reed of Missouri, June 29, July 21 and 22, 1921). It is strikingly significant of the Children's Bureau's general attitude, that it can give one convention of foreigners, brought here to standardize American children, a report about five times as large as the two considered sufficient to describe the operations of the Maternity Act for several years in 43 States.

In spite of the fact that the Supreme Court of the United States holds that "the fundamental theory of liberty upon which all governments in this Union repose, excludes any general power of the state to standardize its children," (Oregon School Cases) the Children's Bureau is obsessed with the idea of standardizing everything connected with children.

Consider the latest pamphlets of the Bureau: No. 153, Standards of Prenatal Care, an Outline for the Use of Physicians; and No. 154, Standards for Physicians Conducting Conferences in Child-Health Centers."

Under what theory of arbitrary, unlimited and centralized power, even, would a Caesar, a Kaiser, or any other Dictator, place the "standardization of physicians" under the lay Chief of the Federal Children's Bureau?

Yet the power is assumed by the Bureau, and exercised as much as possible, without even bothering to ask specific legal authority from Congress.

Even efficient autocracy would require professional knowledge on the part of the central administrator. But the Chief of the Children's Bureau, neither physician, lawyer, mother nor nurse, issues a perfect stream of "standards" for everybody; physicians, judges of juvenile courts, probation officers, nurses, mothers and children, not only in defiance of "the fundamental theory of liberty" of the American dual system of government, but in disregard of the standards of common sense of even a despotic form of government.

The Bureau's conceptions of its functions would

approach megalomania, if it were not known to be following a sane enough Socialist Program to capture all power over the family for one central office.

Miss Julia C. Lathrop, former Chief, for example, declared:

"We propose a campaign to furnish knowledge without cost to all comers." (House Hearings, December, 1920, p. 21).

Miss Grace Abbott, present Chief of the Children's Bureau:

"The Children's Bureau has the whole field of child welfare and child care." (Proceedings, National Women's Trade Union League, Convention, Waukegan, Ill., June 5-10, 1922, p. 89).

(C) CHILD LABOR AMENDMENT, SUBMITTED TO STATES,  
JUNE 2, 1924 .

The third and boldest legislative fraud to trick Congress and the country into adopting the Kelley Program of Revolution by Legislation, was the "Child" Labor Federal amendment, providing that,

"Congress shall have power to limit, regulate and prohibit the labor of persons under 18 years of age."

Emboldened by the apparent docility with which the country had submitted to the establishment of a central Socialist administrative machine: (1) by planting the Children's Bureau—a Socialist Propaganda Agency—at the heart of the Federal Government; and (2) by giving it vast administrative power in the States over Health Boards, physicians, nurses, mothers and children under the so-called Maternity Act, Mrs. Kelley now reached out, (3) for full power for this Socialist administrative machine—the Children's Bureau—over every youth up to 18 in America, in all occupations, in all schools and colleges, in the home and on the farm!

This time Mrs. Kelley overplayed. She overestimated the stupidity of the people. The people understood this amendment. And they crushed it with a unanimity of judgment by all kinds and conditions of the population, proving that it went deeper than superficial differences, and outraged a basic instinct—the instinct of every species to protect and possess its young.

It will be noted in regard to the Child Labor section of the Kelley Program, as well as to its other parts, that what Senator Heyburn prophesied is true. It reaches out first for the children of the poor, and outrages them most directly—"they would not attempt to execute it except as against the class that is most helpless in their hands," as Senator Heyburn declared. (Congressional Record, Jan. 8, 1912, p. 766).

#### PROMOTED BY FRAUD AND TRICKERY

Like the rest of the Kelley Program, this amendment was promoted by fraud and trickery, by exploiting sentiment for the child—the most appealing object in nature. But it was not a "Child" Labor Amendment at all. The word, "child" appears nowhere in the resolution. That word and all reference to "child" or "children" were deliberately excluded from the text (although stressed in all propaganda) because the instigators of the amendment knew that no Court would interpret the word, "child" to mean persons up to 18 years of age.

Mrs. Kelley, primarily responsible for drafting the amendment, said:

"Nothing can be more uncertain than the limitations which future courts may place upon the word, 'child.' . . . I am afraid of child." (Senate Hearing, January, 1923, p. 121).

"I am indeed very apprehensive about the use of the word, 'child' in this matter." (Ibid., page 90).

Again, she referred to "this vague word, 'child.'" (Ibid., page 90). There is nothing vague about the word, "child" at all—and that was why Mrs. Kelley feared it. Professor William Draper Lewis of the Child Labor Committee wrote:

"You will see from an examination of the cases to which I refer that the term 'child' has been held to mean persons under 14 years of age." (Senate Report on S. J. Res. 1, 68th Congress, p. 125).

They could not use the word, "child" in the amendment because it would limit them to "persons under 14 years of age."

But in the magazines, Mrs. Kelley herself led the campaign of double-dealing by calling it "The Children's Amendment" (Good Housekeeping, February, 1923) and this it was called by most of the propagandists.

In a petition to the Senate, printed in the Congressional Record, May 31, 1924, it is shown that the people were similarly fooled concerning the age limit. Not one person in ten thousand dreams that the Federal maximum, of 18 years, in Section 1 of the amendment, is merely the "minimum standard" of Section 2 of the amendment, below which the States were not to be permitted to fall, and above which, to "the full 21 years" they were to be "stimulated" to go. Miss Abbott declared:

"I want to get a Federal minimum, and at the same time give the States an opportunity to raise, but not lower, the Federal standards." (House Hearings, February-March, 1924, p. 272).

Again, Miss Abbott said:

"I shall be enormously disappointed if we do not have the Federal law only a minimum law, but we will have continuing the problem of raising the standards in the States." (Ibid. p. 269).

"Where there has been a Federal law, there has always been an increasing tendency to raise the State standards." (Ibid.)

Can it be denied that the people are being tricked?

The giant deceit of the Child Labor Amendment—as a Bolshevik plot against American farmers—will be exposed in the Revolutionary Conspiracy Section of this Memorandum.

#### (D) EXTENSION OF THE MATERNITY ACT

Why was an extension of the Maternity Act for two years demanded by the Children's Bureau more than a year before the expiration of the present five-year period? Why did the Bureau hurry to Congress, in January, 1926—to get the Act extended to 1928 and 1929—when the present Act runs until June 30, 1927?

Was it to use this subsidy as a campaign fund to attempt to induce the State Legislatures, of which

more than 40 meet again in 1927, to ratify the "Child" Labor Amendment?

Was it to trick the Congress into keeping up the Maternity Act for two more years before the vital statistics reports of the Census Bureau, for the five-year period, revealed the utter fraud and futility of the Act.

There are several significant official statements in this connection.

In the Chief of the Children's Bureau's Annual Report, 1925, despite acknowledgment therein that 34 State Legislatures had acted against the Amendment, Miss Abbott says:

"It is not to be expected that the efforts to secure ratification of the amendment will be abandoned." . . . etc., (p. 8).

That is, "it is not to be expected" that this Socialist Bureau will respect the action of three-fourths of the States, and of the American people on this subject, but will do everything in its power to overturn this overwhelming mandate, by lobby pressure and propaganda on the 1927 Legislatures.

In the letter to the Secretary of Labor to Chairman Parker of the Interstate and Foreign Commerce Committee, December 21, 1925, is this statement:

"In order that the State Legislatures meeting in January, 1927, may know what funds will be available, action with reference to this appropriation (for extension of the Maternity Act) should be taken by the present Congress." (House Hearings, Jan. 14, 1926, p. 27-28).

That is the official explanation—so that the 40 or more Legislatures meeting in 1927, with power to ratify the "Child" Labor Amendment—"may know what funds will be available" under the Maternity Act.

That the Secretary's letter was prepared, at least in part, by the Chief of the Children's Bureau, is self-evident from the fact that it contains a paragraph identical with one in Miss Abbott's Annual Report, September 15, 1925, page 2. It is inconceivable that the Secretary "happened" to repeat Miss Abbott's exact language, and equally inconceivable that he would lift material from the Bureau's Annual Report without due credit and direct quotation. Miss Abbott herself indicated that the Secretary only "signed" the letter, in the following anxious communication to Chairman Parker:

January 6, 1926.

"My dear Mr. Parker: I have just learned that the letter with reference to the Sheppard-Towner Act which the Secretary of Labor wrote you on December 21 has failed to reach you in some way. He has therefore signed the enclosed and has asked me to see that it reaches you today." (Signed)

GRACE ABBOTT.

The Child Labor Amendment and the Maternity Act are inextricably interlocked, and the Maternity Act, with its subsidies, has always been a campaign fund measure for national control of "child" labor.

It was not until the Supreme Court held the first Federal Child Labor Law unconstitutional, June 3, 1918, that the "Maternity Act" drive started. And



then the campaign for control through subsidies began at once, with the introduction, July 1, 1918, of the original "Maternity Bill" by Miss Jeannette Rankin (H. R. 12634, 65th Congress). Miss Rankin is Field Secretary of Mrs. Florence Kelley's National Consumers League, since Montana refused to re-elect Miss Rankin. The second National Child Labor Law passed, instead, Feb. 24, 1919.

Likewise, the second big "drive" for the Maternity Act began in 1920, when the second National Child Labor Law had been held unconstitutional in North Carolina, and was in the U. S. Supreme Court on appeal.

DON'T FORGET TO FILE INCOME TAX RETURN

FEDERAL INCOME TAX PROVISIONS AFFECTING PHYSICIANS

It will be noted that returns need not be filed before the middle of March. It is possible that before that time Congress will make a credit reduction applicable on the 1926 tax payment.

A sharp revision of the normal tax rate and a modification of the surtax and provision for an "earned income" reduction constitute the most important changes made in the federal income tax law.

Returns must be made to the Collector of Internal Revenue of the district in which the individual affected resides before March 15, 1927.

Responsibility for making these returns is vested with the individual. Blank forms are mailed to all known persons who have previously made returns. Failure to receive such forms, however, will not be accepted as an excuse for failure to file within the time specified by the law.

Under regulations effective last year, all persons deriving incomes from a business or profession, or both, are required to file their return upon Form 1040 (the large form). The small form, or 1040A, is for persons who secure their incomes from wages, salaries or interest alone and where the gross amount is less than \$5,000. The large form, or 1040, is also used by persons reporting an income of \$5,000 or over, regardless of the nature of its source.

The large form, or 1040, will be mailed to all Illinois physicians by the Collectors of Internal Revenue. If such blank is not received, apply to the Collector of Internal Revenue of the district in which you reside.

NEW RATES

The Normal Tax Rates: First \$4,000 in excess of credits, one and one-half per cent; next \$4,000, three per cent; and the remainder of net income, five per cent.

The Surtax Rates: Surtax is computed upon net income before personal exemption dividends and taxable liberty bond interest is deducted. The surtax is not applicable to net incomes of less than \$10,000.00 and upon net incomes in excess of that amount, the

tax is levied on a graduated scale. A partial list of surtax rates is shown below:

	Rate of Tax	Tax
Net incomes up to \$10,000.....		None
In excess of \$10,000.00 and not in excess of \$14,000.00.....	1%	\$ 40.00
In excess of \$14,000.00 and not in excess of \$16,000.00.....	2%	80.00
In excess of \$16,000.00 and not in excess of \$18,000.00.....	3%	140.00
In excess of \$18,000.00 and not in excess of \$20,000.00.....	4%	220.00

For example, a person having a net income of \$11,500.00 will be required to pay a 1% surtax on that amount of income in excess of \$10,000.00 or 1% on \$1,500.00, a surtax of \$15.00. A person whose net income was \$14,800.00 would compute his surtax as 1% on the first \$4,000.00 in excess of \$10,000.00 or \$40.00 plus 2% on net income in excess of \$14,000.00, that is, 2% on \$800.00, \$16.00; a total of \$56.00 surtax.

LIABILITY TO FILE

If married, a return should be filed if the net income was \$3,500 or over. If single, a return should be filed if the net income was \$1,500 or over. If the Gross Income was \$5,000 or over, a return is required whether married or single, and regardless of the net amount left over after legitimate expenses are deducted.

Liability to file a return is contingent upon the amount of net income, and not upon a net income with personal exemptions deducted. In other words, if the net income was \$1,500 or \$3,500, single or married respectively, and personal exemptions reduce these amounts, individuals will not be required to pay a tax, but must file a return.

The Internal Revenue authorities consider a person married on December 31, 1925, as being eligible to the marital exemptions.

PERSONAL EXEMPTIONS ALLOWED

If married and living with wife, or the head of a family for the entire year an exemption of \$3,500 is permitted.

If single, and not the head of a family, the personal exemption is \$1,500. An additional \$400 for each person, other than husband or wife, dependent upon and receiving support from you, is allowed, provided the dependent is under 18 years of age, or incapable of support because of mental or physical condition.

In the case of a change in marital status during the year, the exemptions of \$3,500 and \$1,500 shall be prorated over the period of married and single state.

OFFICE RENTALS

If a physician pays rent to another person for office space, he is permitted to deduct the amount from his gross income. If he owns his home and maintains an office in it, he cannot claim a deduction for office rent.

AUTOMOBILE

The cost of repair and upkeep of an automobile used in professional visits may be deducted. The salary of



a chauffeur, if most of his time is spent in driving to professional calls, may also be deducted. Sums spent for taxi hire, car fares, etc., while on professional calls, may be deducted. The basic cost of a business automobile may be depreciated.

However, the excise, or "War Tax" paid on the purchase of a new automobile is not deductible, for the reason that this tax is assessed against the manufacturer, who passes it on to the purchaser as a part of the cost of the machine. The original cost of a business automobile, however, may be depreciated. To arrive at original cost of a business automobile take the list price of car, f. o. b. factory, which is the basis of deduction, but divided over a period of years. In other words, if the list price of an automobile is \$2,000 and its estimated period of usefulness is five years, \$400 or 20 per cent of list price, f. o. b., may be deducted each year for 5 years.

ASSISTANTS

Deductions are permitted for the salary of a nurse, laboratory assistant, stenographer or clerical worker in the office so long as the duties of these are in connection with the physician's professional work. Wages paid to maids taking care of the office, answering the telephones are also deductible, as are any funds paid to employes for services rendered in connection with practice, or care and treatment of patients.

MEDICINES, INSTRUMENTS, SUPPLIES

Medicines used in the office to treat patients, bandaging, laboratory materials and all other supplies necessary to operate a physician's office may be deducted. Upon surgical instruments, one fifth of the purchase price may be deducted annually for five years under depreciation account.

GENERAL OFFICE EXPENSE

Cost of all telephones used in the office is exempt and may be deducted. Expenditures for heat, light and water for the office may be deducted. An annual depreciation of 10 per cent of the cost of office furnishings and fixtures may be deducted.

LIBRARY

Most physicians have a more or less extensive library. Courts have held that medical books during the course of ten years become out of date. For this reason, a 10 per cent depreciation may be deducted annually.

TAXES, LICENSES

Any taxes paid upon materials required in professional work are exempt. All licenses which the physician is required to take out, may be taken off the gross income reported. This includes the license to prescribe or use alcohol, narcotic tax, automobile license, local occupational taxes, etc.

PROFESSIONAL DUES

Dues paid to professional associations to which, in the interest of his business or profession he belongs, are exempt and may be deducted. Also subscriptions to all medical journals or scientific publications are exempt. However, the Internal Revenue Collector has announced that expenses involved in attending the

annual meetings of professional societies are not a deductible item.

WHEN TO DEDUCT DEBTS

If the physician's books are kept according to the "Cash Receipts and Disbursements" system, he may not charge off any unpaid debts because "if his books are kept according to this system, he is not only reporting as gross income those accounts which have proved to be good and therefore bad accounts cannot be deducted because they have already been excluded."

If the books are kept upon an "accrual basis" (that is if the basis of expense actually incurred and payable even though not yet paid, or income earned although not yet collected), it is permitted to charge off on the income tax blank all debts which have been definitely ascertained to be worthless during the fiscal year covered by the report.

In the same way, the physician is permitted to claim deductions for all other expenses within the scope of his profession, and the amount of his tax is determined on the net income which remains after all these items have been deducted.

EARNED INCOME

For several years students of income taxation have contended that income derived from the personal endeavor of a tax payer should not be taxed at as great a rate as is income derived from other sources. This fact is for the first time recognized in the new law which provides that the income shall be first computed in the usual way and then it shall be recomputed on the earned income as if that income were the entire income.

The term "Earned Income" means wages, salaries, professional fees, or compensation for services.

The first \$5,000.00 of net income is considered earned income, no matter from what source derived. The 20% limitation placed on net income derived from a business where both capital and personal service are material income producing factors, is not applicable to physicians whose income is held to be directly attributable to their rendition of personal service. However, in no case may the earned income be considered to be more than \$20,000.00.

It is anticipated that the earned income credit provision of the law will create a great amount of confusion in the computation of tax and for the benefit of our readers an example applicable to the income of a physician is given below:

Net income from practice.....	\$ 8,000.00
Net income from rents.....	500.00
Net income from sale of property.....	5,000.00
<hr/>	
Total net income.....	\$13,500.00
Taxpayer married with two dependents under 18 years of age.	
<hr/>	
COMPUTATION	
Net income .....	\$13,500.00
Marital exemption \$3,500; dependent exemption \$800 .....	4,300.00
<hr/>	
Subject to normal tax.....	9,200.00

First \$4,000.00 subject to normal 1½% tax...	4,000.00
	5,200.00
Second \$4,000.00 subject to normal 3% tax...	4,000.00
Remainder subject to normal 5% tax.....	1,200.00
Normal 1½% tax .....	60.00
Normal 3% tax .....	120.00
Normal 5% tax .....	60.00
Surtax 1% on net income in excess of \$10,000.00 .....	35.00
	275.00
Earned income credit (see computation below) .....	16.37

Total tax due..... 258.63

COMPUTATION OF EARNED INCOME CREDIT

Earned income (income from practice).....	\$ 8,000.00
Exemption .....	4,300.00
Subject to normal tax.....	3,700.00
Normal 1½% tax.....	65.50
Earned income credit ¼ of tax on earned income or .....	16.37

NOTE: Returns need not be filed before March 15. There is a possibility that before March 15, Congress will make a credit reduction applicable on the 1926 tax payment

## INTESTINAL STRICTURE AND PERNICIOUS ANEMIA

(Wiechmann, Ernst and Linsser, Fritz—*Münchener medizinische Wochenschrift*, 73: 372-373, February 26, 1926)

Recent studies seem to see the cause of pernicious anemia in an abnormal resorption of bacterial toxins from the small intestine as well as from the colon. Van der Reis observed a considerable change in the basic flora of the small intestine and Seyderhelm thinks he has found the exciting toxin of bothriocephalus anemia and most of the cases of cryptogenetic anemia. On this basis the cases of pernicious anemia accompanied by a stricture of the intestine seem to be highly interesting. As they have been seldom mentioned in the literature, especially in Germany, the author reports a case in which both illnesses seem to be in relation to each other.

The patient, female, 22 years old, unmarried, was of a healthy family in which there had never been cases of anemia. From her fourth to her eighth year she had frequently suffered from "stomach ache" and vomiting. She was well until the age of 15 when the same ailments began again and remained constant. When the author saw her, her complexion was as yellow as wax, and there were brown spots in some places on her face. The thoracic organs were fairly healthy. The heart was widened on both sides. There was a loud systolic murmur in the whole heart. The pulmonary sound was accentuated, the blood pressure 110—73 Hg. The pulse was rhythmical, 90 to 100 per

minute. The abdomen was filled with gas. The gastric region was sensitive to pressure. On the right side of the umbilicus a gurgling and splashing were to be heard distinctly. After a potato test breakfast the stools were of a light color, without blood, without free hydrochloric acid and without parasite eggs. The x-ray picture showed the stomach normally shaped, filled and placed. There was no niche and the outlines were sharp. Seven and one-half hours after the meal the contrast meal was incoherently filling the colon. In the true pelvis, on the right side, large loops of the small intestine were to be seen. Over their filling was a liquid surface with gas bubbles. These loops moved violently in both directions, pushing the liquid up and down under intestinal murmur. One of the loops was particularly large and ended in a sack near the cecum at the height of the crest of the ileum. In this place the content regurgitated, and the intestinal section above was only slightly filled with incoherent substances. In the region of the right flexure the colon content was distinguishable. From here to the descending colon the large intestine was very little filled. Fourteen hours after the meal, the transverse, the descending colon and the sigmoid were filled. Feces had been passed.

The blood-picture and the urine were typical for pernicious anemia.

The patient refused to be operated upon and did not submit to a longer treatment; but it was evident that the anemia was connected with the stricture. It is a striking fact that many cases of stricture of the intestine are not accompanied by pernicious anemia. It is probably only under certain consequences of mostly constitutional origin that strictures of the intestine cause an abnormal permeability of the intestinal mucous membrane for specific toxins, which in this way invade the blood-vessels. In some cases of a stricture in the lower regions, the bacteria of the large intestine may invade the small intestine creating the conditions favorable for the resorption of toxins which damage the blood.

## WHO IS THE SINNER?

"A gentleman called me handsome yesterday," said a rather elderly lady to her minister. "Do you think it is sinful of me to feel a little proud of the compliment?"

"Not at all, ma'am," replied the minister. "It's the gentleman who is the sinner, not you."—United Effort (Pittsburgh).

## A DISAPPOINTED YOUTH

"Yes," said the tall man, "I have had many disappointments, but none stands out like the one that came to me when I was a boy."

"Some terrible shock that fixed itself indelibly in your memory, I suppose?"

"Exactly," said the tall man. "I had crawled under a tent to see the circus, and I discovered it was a revival meeting."



## Original Articles

### PREVENTIVE MEDICINE IN PEDIATRICS

A. E. WILLIAMS, B. S., M. D.

ROCK ISLAND

The child born in the year 2000 will be better or worse as we care for our children today.

We should therefore eliminate from parent-hood all epileptics, neurotics, insane, active syphilitis and tuberculars and many cardiac cases; for we know that the health of the prospective mother has an enormous influence on the future child.

I would not have cousins, chronic alcoholics or criminals marry or at least raise families.

During the months of pregnancy preventive medicine indirectly may be practised by maintaining proper nutrition of the child in utero by regulating the diet, habits and hygiene of the mother; by limiting her weight to a reasonable increase before labor.

Some recommend the use of iodine in small doses during this period to prevent goiter. (Hartssock).

Sane, careful obstetrics is a most important preventive measure in pediatrics. Before the very first breath is drawn squeeze mucus from the mouth and before the cord is tied use Crede method for the eyes. So important is this latter wonderful preventive measure that to neglect it, is a violation of the State Law.

Tying the cord tightly and aseptically may mean saving a life for the umbilical wound is the most dangerous and most frequent portal of infection. If born after a severe delivery, the baby should be at once carefully examined for injuries, especially cerebral. If marked spasticity of the arms or legs are present or a convulsion ensues, twenty or thirty cubic centimeters of the father's blood should be injected into the buttocks of the child.

With our modern conception of Little's disease we may by this simple procedure save a child from worse than death.

Guard him from Ritter's disease by proper isolation from all suspicious skin cases.

With our little patient safely separated from its mother, what can we do to prevent disease

may well be discussed under 1, Nutrition; 2, Hygiene; 3, Immunity.

We all agree that maternal nursing is the most important single factor in preventing disease during the first year of life. It therefore devolves upon the physician to insist that every mother capable of doing so, must nurse her child. To this end, her general health has been promoted and her nipples properly developed and hardened during the last months of pregnancy. If the supply is scant, considerable benefit may be derived by thoroughly emptying the mammary gland, if necessary with the aid of the electric breast pump; by proper diet and possibly by use of mammary gland extract.

If the milk supply fails or if for any other of the well known reasons, we must resort to artificial feeding, we are perhaps bewildered by the vast assortment of foods that are recommended in our medical literature.

Some pediatricist said that 70% of his work is infant feeding. If this be true, the general practitioner can well afford to pay more attention to this most important subject.

Percentage feeding, so much in vogue, has given away somewhat to caloric feed and now we feed everything from dried milk and milk, water and sugar mixtures to malt soup, karo syrup and lactic acid.

Our chief fault is not to familiarize ourselves with the types of indigestion as indicated by character of stools and symptoms of our patient, so that we can use artificial food as a skilled mechanic would use a tool. Our patients drift off to the co-called baby specialist often to our discredit, only for this one reason.

During the first year we must not forget the early symptoms of rickets and scurvy. Most of us are using cod-liver oil and juices in the following order, orange, prune, tomato and pineapple. Better formed and more beautiful babies are growing because of this practice.

When the infant reaches the age of seven or eight months the eruption of teeth announces the demand of nature for solid foods, and we must by careful observation change our milk to the mixed diet by the addition of cereals, eggs, fresh vegetables, finely chopped meat, custards etc., remembering that milk is the mainstay till the second dentation.

The importance of whole wheat bread has been

\*Read before the Section on Public Health and Hygiene, Illinois State Medical Society, Champaign, May 18, 1926.



emphasized as containing the necessary elements till the second dentation.

It is well for the physician to have **standard** dietary lists for the child of certain developmental period and modify these according to the requirements of the individual patient, always giving the mother written copy.

Next to nutrition, hygiene plays the most important role in prevention of disease.

*Sleep.*—Normally this varies from twenty-two hours at birth to about fourteen hours at two years and ten hours at puberty. Put the child to sleep in the proper way; at a regular time, in a bed by itself, in a room alone and never with a bottle, nipple or thumb in its mouth; awaken it at regular intervals for nursing.

*Air.*—Fresh air is the cheapest and one of the most effective of preventive measures and yet one of the most difficult to administer; therefore, often neglected by the family physician. Cooperation of the neighbor next door; the grandmother, and every member of the household must exist before this measure is permanently effective. All children and especially the delicate, undernourished and pretubercular need an abundance of fresh air. From the third week of life in suitable weather the infant may be taken out of doors. It is well to specify certain hours for airing. For ventilation of living or sleeping room, a window board six inches in width and the length of the window's width is a most effective and simple device.

*Sunshine's* greatest fault is its price, so to prevent rickets, malnutrition, tuberculosis, etc., we isolate a minute portion of the solar spectrum and sell it to our patients in the form of ultra-violet ray to infra-red heat. Wouldn't we feel ourselves better men rather to teach our patients the value of the gift of a beneficent Creator when He said, "Let there be Light," than to mulct or perhaps better milk them of a few dollars in our office? Yet I am not unmindful of the fact that there are fussy mothers who would rather have their babies tanned at two dollars per treatment than by the sun's rays.

*Exercise*, usually never mentioned by the doctor unless treating a cardiac or a nephritic. The baby begins its exercise at two weeks by moving its arms and legs about. The normal time of holding its head (four months), sitting alone (six to seven months), creeping (seven months), and walking (one year), should all be known to

the physician, that unusual backwardness may be noted and possibly corrected by endocrinology. In older children exercise should be regulated; certain forms encouraged and others discouraged for fear of cardiac hypertrophy and its consequences.

Round shoulders, narrow chest, flat feet, scoliosis, habitual constipation, malnutrition, all call for preventive treatment by gymnastic therapeutics. Until the family physician familiarizes himself with these methods and is able and willing to teach them to his patients, little will be accomplished to our credit.

Proper mental training and habit formation are no less important than physical training. This should begin with their birthday by insisting on regularity in feeding, sleeping, and airing. At about three months of age their power of observation becomes manifest and we discover that they are the keenest of all observers and imitators. Remembering that proper discipline is good at any age; as the child grows older, the parent should inculcate self-control, fearlessness, self-sacrifice, moderation in all things, truthfulness, prompt decision, constancy of purpose, to obey and to learn that he is not the centre of the household. Continual nagging and constant "don'ts" from a nervous mother have wrecked more children's mentality than any one thing that has come to my notice.

*Immunity*, the greatest triumph in prophylaxis is vaccination.

Discovered in 1796 by Jenner, a minister's son.

Too well known to discuss but I wish only to emphasize the fact that it is the duty of the family physician to vaccinate at six months, or soon after, preferably in the months of May and October, every child he delivers.

*Diphtheria*, probably second in importance when we consider that diphtheria has the highest mortality of all infectious diseases in children from one to ten years and in children from two to five years the mortality is greater than all other combined infectious diseases.

The conservative physician is compelled to recognize the effectiveness of this measure in the face of such overwhelming evidence as presented by A. Zingher and others in the last five years. Therefore, I repeat what I said about vaccination, that it is the duty of the family physician to immunize with toxin-anti-toxin every child from

six months to ten years of age who is under his supervision.

*Scarlet Fever.*—I am willing to wait for a more perfect development of a preventive measure; also with measles. The physician in general practice will avoid many pitfalls by staying a year or two behind the experimentalist and investigator.

*Typhoid serum* should be used in the presence of epidemics and be recommended to every family that contemplates a motor trip away from home.

Anti-tetanic serum should be more frequently used in general practice among children for its value as a preventive of tetanus is authoritatively established.

Pertussis vaccine has some value both as a preventive and curative measure,—I use it almost routinely.

Simple advice, as the removal of feather pillows, the exclusion of household pets, refraining from certain articles of diet may mean a life of comfort to a potential asthmatic.

To practice preventive medicine, we must see our patients often. To see them often at regular office fee is out of the question except among a few whose practice is largely among the wealthy. Therefore, it is necessary to conceal our fee in an obstetrical fee, or to charge a very reasonable or small fee for after service in the care of well children.

Mothers should be advised to bring their babies at about one month of age for first examination. At this time a careful and exhaustive examination of the child is made and recorded. Subsequent examinations and records may be made at intervals of one to four weeks by yourself or office assistant or nurse as your time will permit. The following points should be noted at each subsequent examination; number of feedings; ounces at each feeding (amount taken), age, weight, stools, vomiting, appetite, sleep, and whether cathartics are administered. A rubber stamp greatly facilitates this record. Your nurse or assistant is to notify you should any abnormality be present.

For the first year I use the record used by Dr. Roger Dennett in his private work. For one to six years of age the record devised by the American Child Welfare Association is excellent.

These simple elementary methods in the prevention of diseases in children are a part of the make

up of every general practitioner and he is using them every day. I believe he would retain his practice and his service would be more efficient should he adopt some such after care as I have outlined.

If a doctor is too busy to carry out this method of after-care, he is making enough money to employ someone to do it under his direction.

In my fancy I see a host of people in many groups marching under one banner. The United States Public Health Service pushing from our shores deadly disease; the American Child Health Association creating sentiment for the child's well-being in various phases; a great insurance company scattering authoritative pamphlets all over this country to promote practical measures in handling children in health and disease; Metropolitan newspapers and National magazines filling their columns with detailed description of infant care; State and City health departments in police uniform, isolating infectious foci; cleansing our water and milk supply and aiding in many other ways the control of disease; our great universities (Vassar) establishing chairs of Euthenics to teach mothers better baby care; Women's Clubs, Social Service Centers, community nurses, by motherly and sometimes maidenly methods, trying "en masse" to help the child; thousands of intelligent eager physicians with instruments of rare precision ready and willing to treat the baby, (the baby specialist) separated only by a gold band from one hundred and fifty thousand family physicians, who, of all the marching hosts, walk closest to the mother with her child to advise her and to minister directly to her offspring.

I am proud to belong to this last group and jealously guard my privilege to be the mother's closest friend.

#### ABSTRACT OF DISCUSSION

Dr. J. S. Templeton, Pinckneyville, as a general practitioner, felt that his interest in this matter is just as "The Mothers' Friend."

In an experience of over sixteen hundred obstetric cases he had observed only one with venereal ophthalmia, not because of his care alone but largely because of the education of the mother. If the silver nitrate solution is not used immediately the mothers of today, whether they live in town or five or ten miles from town, will remind one that the baby's eyes have not been looked after.



Years ago physicians did not look after the umbilical wound as we do now. They scorched a cloth on the old cook stove, greased it and some of us dressed the cord with carbolized vaseline. No matter how carefully you fix the cord, there is always danger of infection. If you have some little ointment there that will prevent infection, it is better than just a dry dressing.

In an experiment at one time in dressing fifty cords, one after the other with a dry dressing, just cotton and no disinfectant whatever he did not get a single infected cord among them, but they were from twenty-four to forty-eight hours longer coming from the body than those treated with carbolated vaseline.

Every young mother is grasping in this day for information as to how to raise a child. A great many little booklets are sent out and a great many mothers keep records; they get Dr. Evans' notes in the press and they get letters from the Department of Health; they get information through the woman's clubs and in the rural communities ninety per cent. of young mothers and old ones as well, know enough to give the child fruit just as early in life as necessary.

In one family of ample wealth and fairly well educated, with three bright healthy children, his service is not of a curative nature but rather preventive. The children have had toxin-antitoxin; they now have whooping cough and they are getting whooping cough serum, and they get those things that we believe will prevent disease and very little medicine. Even in our rural communities that method is largely taking the place of the old customs. Now the young people are coming to us for typhoid serum before they go to the State Normal School where several cases of typhoid fever have developed.

Referring to household pets, the Doctor related an interesting experience in a family that had lost one child from diphtheria before he was consulted. Later two other children of that family and children of two other families contracted the infection. At the request of the State Department of Health the Doctor made a special investigation. After culturing over sixty throats with negative results his attention was called to a sick pet dog with which the first patient had played. The dog's throat gave a positive culture and it was apparent that it started the series of cases as no cases developed after the dog was executed.

In another instance a family vacated their home after having a case of diphtheria. A child of the family that moved in found an old rag doll left by the first patient and promptly contracted diphtheria. "Not only household pets but playthings should be looked after carefully, especially of diseased children."

He did not agree with the advice, "If you don't have time to do it yourself, get your nurse to help." He would take the time, and give the children a careful examination, from time to time, and turn over some other work, if necessary.

Dr. John P. Coughlin, Chicago, thought that we

should all specialize in preventive medicine, which is really medicine in the full sense of the word.

The obstetrician has taken care of the eyes and the cord and the baby is turned over to us a citizen, and it is up to us as pediatricians to guide that child through life up to puberty, and to turn it over then to the adult practitioner a healthy child. Paramount among all other needs is nutrition, and of nutrition the food par excellence is the breast milk. A child will get more immunity from the breast milk from a healthy mother than it will get from all the vaccines and serums that Parke-Davis and Lilly ever will make. Over ninety per cent. of the mothers can nurse their babies if we will insist that mother continue nursing the baby long after the milk has left, according to her story, we will find in a week or two weeks or a month an abundant supply of milk will return. He has a theory that perhaps there is an interchange of something after the delivery of the child that has to do with the stimulating of the breast. "I am going to ask the same question of you men who are doing obstetrics—let that placenta alone, wait twenty minutes, half an hour or an hour before you start expressing it, and I assure you we would be pleased to know what results you have, especially with the mother who has never been able to nurse the baby before."

The hygiene of the baby is something given more and more attention every day, getting children into sunlight, fresh air and making use of all the hygienic measures Dr. Williams mentioned.

There is another factor, that is getting the baby away from a sick adult. In the family of pathogenic microbes there are no immature microbes. A baby is an immature adult, but the father of the microbe family does not send one of his children out to attack this immature man, this baby. He goes out and does that job himself, so where there is an infectious or contagious disease in the family, get the baby away from it. In most instances we try to get the contagious carrier away from the baby, but very often we have to get a baby away from an adult.

In the museum of the Children's Memorial Hospital are four specimens of lung tissue in children under six months of age, all containing tubercular cavities. The mother of one of these children died of tuberculosis when the child was three days old and another died when the baby was three or four months old, but it simply goes to show this—that there is no human being, no class of human beings that will grasp tuberculosis on exposure quicker than an infant. Dr. Drennan of the Children's Memorial Hospital knows of a case of a child who was exposed in a tubercular house where there was an open case of tuberculosis for fifteen minutes, and the child succumbed; the lung is in the hospital now with a cavity the size of a plum. We have heard from time to time there is no cavitation in the lung of children under six months of age. There are four specimens there of very marked cavitation of the lungs of children under six months of age.

He was called to see a baby with a skin disease in a



nursery in one of the hospitals in Chicago, and made a diagnosis of impetigo. They removed the sick baby from the nursey, and he said, "I think you are doing this upside down; why don't you remove the healthy babies? The nursery is already contaminated." The only way to disinfect is to sterilize the nursery and paint the walls; not only remove the contagious disease carrier from the baby but remove the baby from the carrier.

We have mothers come in from time to time with a six-months-old baby that should sit up and doesn't, and they are a little worried. At twelve months old the baby should walk and does not. I try and allay their fears, and tell them "I have two of the world's greatest children myself and the girl never sat up until she was nine months old and never walked until she was sixteen months old; the boy never sat up until he was eight months old." They are not going to sit up as early as they used to or walk as early as they used to because we are not picking them up and lugging them around as much as we formerly did. You will find we are treating the babies more sanely, and they are not going to be acrobats early in life.

About the agents we are using to produce immunity, we should be very careful that we do not make use of something that has not been accepted, that has not been definitely proved; at the same time we should look to those things with an open mind and then as soon as they have been proved to be of value use them and use them properly. The toxin-antitoxin has conferred an immunity on children. He believes the Schick test of children under two years of age is of little value, and we are not Schicking children under two years of age at all any more. After two, we are Schicking them and then if necessary giving them toxin-antitoxin.

Why it is the pediatricians see babies every month up to the time they are a year old and then turn them loose. Many conditions are remediable if seen early. We see children with valvular heart disease, that would never have gone on to the extent that it would cripple the children had we seen them early. His rule, with the children over a year old, is to tell the mothers to bring them in twice a year, on the birthday or day before, and six months after their birthday. That is an easy thing for them to remember.

Dr. R. C. Cook, State Department of Health, Springfield: I do not believe too much can be said of Dr. Williams' paper. We find a great many of our lay publications printing scientific articles on child care for mothers to read and I think I should say that few if any of the articles I have read are as well written as this paper by Dr. Williams. It is good for us here in the Public Health Section. I have enjoyed it thoroughly and I believe that it could be well brought to the mothers of Illinois; in fact, to my mind it is pretty nearly a masterpiece along this line, because it covers the field very thoroughly and covers it very effectively all the way from pre-natal life throughout the period of infancy.

## THE OPEN TREATMENT OF FRACTURE\*

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Whenever and wherever the treatment of fracture is discussed, the relative merit of the open and closed methods is debated regularly. The latter was the accepted standard for many centuries until surgeons began to observe with dismay, by means of the roentgen ray, the frequency of poor anatomic restoration of the fragments in cases of healed fracture, in many of which functional results were excellent. The development of



Fig. 1. Fracture-dislocation of the lower epiphysis of the humerus reduced by the open method; before open reduction.

surgical technic to its present high standard rendered possible the restoration of the bone fragments to practically perfect anatomic position. This attainment appealed to certain surgeons, especially Sir Arbuthnot Lane who became the leading advocate of the open method and insisted that the patient with a fracture was entitled to better results than he was enjoying at that time.

As a means to this end, he designed his metal plate, now so universally known as the Lane plate. The time was ripe for the advocacy of such measures. The sensational and brilliant results that surgery had attained in abdominal diseases at-

\*Read before the Chicago Medical Society, Chicago, November 3, 1926.

tracted the attention and interest of the surgical world to the neglect of the more humdrum fracture work. The teaching of this branch of surgery was slighted and in wards of the large hospitals cases of fracture were relegated to the younger, inexperienced members of the staff who were poorly grounded in the fundamentals necessary to the proper treatment of fracture. There could be but one result.

The experiences of the war brought the foregoing even more forcibly home to the profession and great effort was made to improve the treatment of fracture. Surgeons, who previously had had no knowledge of the simplest kind of apparatus, were introduced to the Thomas splint and certain other standardized orthopedic appliances,



Fig. 2. Same case as in Figure 1; after reduction.

and taught their value and use. Medical literature again became well sprinkled with articles on fracture, services were organized in the hospitals, and the patient with a fracture was at last cared for by a group whose first interest was the treatment of his type of injury. Perhaps the pendulum swung back too far in favor of conservative measures or the closed treatment, but it had previously swung too far in favor of the open method.

It is not my object to discuss at any length the different methods that may be employed in the open treatment of fracture, for it would be both tedious and lengthy. Legitimate differences of opinion always will exist and standardization

is possible only to a moderate degree. It is rather my purpose to discuss in a broad way the open method and present the type of cases in which we at the Mayo Clinic have used it, the technic which we employed, and our deductions from this experience. Our material is drawn from an agricultural district, so that the fractures are of the type that occur in general practice in any similar community. The total number of 1755 fractures which have been seen in the Clinic in the last five years (1921 to 1925 inclusive), means little except to show, in their distribution into subdivision of 270 recent, 387 old (both treated surgically) and 1098 nonsurgical cases, the type of fracture material that enters the orthopedic service. The fractures that were referred to us under four weeks from the time of injury have been grouped as recent; most of these were referred for the primary setting, although in quite a number of instances a previous attempt had been made to reduce the fracture. All fractures existing longer than this have been called old.

The 1098 fractures not treated surgically comprise a group of cases of old fracture, some of which were ununited, such as hip fractures, some malunited, and some were associated with static arthritis, neuritis, myositis, and so forth. In many of these appliances were fitted, shoes were altered, and various physiotherapeutic procedures instituted. In others the patients have been informed that the present result is the best obtainable under the circumstances and they were advised to leave well enough alone.

During this period our viewpoint on the treatment of fracture did not change materially. We believe that fractures that cannot be controlled with reasonable ease and accuracy by the closed method should be treated by the open method. As our material in the Clinic is practically all referred, it may be assumed that on the whole the group is of a more refractory type. In a previous paper I reported on a series of 259 cases of ununited fracture in which the open operation was performed in all but 3.5 per cent. There is no dispute about the necessity of open operation in cases of old fracture; therefore I shall not discuss them here, but shall confine my remarks chiefly to the recent fractures.

An open operation was performed (Tabulation) in 123 of the 270 cases of recent fracture of this series (45.5 per cent); the remainder, 147 (54.4 per cent) were treated by the closed method. A



comparison of the end-results of the methods is not possible because the types of fracture generally thought suitable for the open method were deemed unsuitable for the closed. A closer analysis of the 270 cases disclosed that of a total of thirteen cases of fractured clavicle, two were treated by the open method; of twenty-six cases of fracture of the humerus, fifteen were treated by the open method; of twenty-nine cases of fracture of the elbow, nineteen were treated by the open method; of ten cases of fracture of the radius alone, three were treated by the open method; of two cases of fracture of the ulna, one

ment in seventeen; twenty-one of fracture of the ankle with open treatment in eleven; and two of fracture in the foot with open treatment in one.

Fractures of the radius and ulna combined, the humerus, the elbow, the tibia and fibula, the femur, the knee, and the ankle were those most frequently subjected to the open method; those of the wrist, hand, foot, clavicle, and hip were more often treated by the closed method.

*The Hand:* Fracture of the metacarpals is often associated with crushing injuries and damage to the tendons. Debridement and plastic operations on tendons may be necessary.



Fig. 3. Fracture of the internal and external malleolus, complicated by a longitudinal fracture of the shaft of the tibia which permits posterior displacement of the foot. *a* Lateral view. *b* Anteroposterior view.

was treated by the open method; of thirty-four cases of fracture of the radius and ulna, twenty-one were treated by the open method; of seventeen cases of fracture of the wrist, none was treated by the open method, and of fifteen cases of fracture in the hand five were treated by the open method. In the lower extremity, there were eleven cases of fracture in the hip with open treatment in one; thirty-one of fracture of the femur with open treatment in fourteen; sixteen of fracture of the knee with open treatment in ten; ten of fracture of the tibia alone with open treatment in three; six of fracture of the fibula with open treatment in none; twenty-seven of fracture of the tibia and fibula with open treat-

*The Radius:* There were seven cases of fracture of the radius, without the involvement of the ulna, which were treated by the closed method, and three treated by the open method. The latter were cases of fracture of the lower third of the bone. In this situation it is occasionally difficult to reduce the fracture and it is necessary to expose and replace the fragments.

*The Ulna:* Fracture of the upper third of the shaft of the ulna either through the olecranon or below it along with dislocation of the head of the radius must be promptly treated by the open method. I have found the beef-bone screw useful in maintaining position.

*The Radius and Ulna:* When both bones of the



forearm are fractured, restitution of the fragments to normal continuity is often difficult and, as the figures show, some type of open operation was resorted to in twenty-one of the thirty-four cases. In children the green-stick fractures may often be readily snapped back into position by merely applying firm traction, but in an adult with heavy muscles, the fragments generally slip out into the muscles and it may be impossible to free the fragments and obtain satisfactory bony apposition. In nine cases the frac-

both. The remaining four were not interfered with for from one week to ten days after the injury or until it was certain that no infection was present. In two of these, it was necessary to use internal fixation (beef-bone plates and screws), and in two the ends of the bones were merely placed in contact, locked in that position, and held there by the aid of external fixation. All four fractures healed by first intention and with practically perfect anatomic restoration and full function.



Fig. 4. Same case as shown in Figure 2, two years later. Note absorption of beef-bone screw. *a* Lateral view. *b* Antero-posterior view.

ture of either one or both bones was compound. Three of these were due to the midwestern type of mangling, corn-shredder injuries in which part or all of the hand was amputated and the fractured bones of the forearm put in as good position as possible. Six were not of this severe type and reduction was the prime object of the surgical measures. In two of the six there were large wounds and no internal fixation was provided in either, the ends of the bones being placed in as nearly normal position as possible and external fixation provided. In both of these cases pus drained and in one sequestrectomy was necessary later, but good functional results followed in

There were twelve cases of simple fracture by the open method. In three internal fixation by aid of beef-bone plates and screws was used, but in nine it was only necessary to engage the fragments and hold them in place by the aid of splints or plaster-of-Paris casts. All the fractures but two were in the middle or lower third of the bone, and about evenly divided between these two positions.

*The Elbow:* There were twenty-nine cases of epiphyseal fracture-dislocation of the lower end of the humerus, twenty of which were in children and nine in adults. Of the twenty cases of fracture in children, treatment was carried out by

the open method in twelve (Figs. 1 and 2), by the closed method in eight. Four were cases of fracture of the head of the radius. Speed has shown us that removal of the head is generally necessary in cases of fracture of the head of the radius (in two of the cases this was done); otherwise pronation and supination may be markedly limited. The roentgen rays are notably deceptive as to the actual amount of pathologic change. If the displacement in fracture of the elbow has been present for any length of time, some callus will have formed and the manipulation incident to operation causes such an over-abundance of callus to be thrown out that, even though perfect reduction is accomplished, function may be poor, owing to the blocking action of the exuberant callus.

*The Humerus:* There were twenty-six cases of fracture of the humerus, of which fifteen were treated by the open method and eleven by the closed. Fracture of the lower end of the humerus and epiphyseal separations were classified under fracture of the elbow. In seven of the cases open reduction was used for fracture of the surgical neck of the humerus. There were three cases of fracture-dislocation of the head which were treated by the open method, the head being removed in one case, and replaced in the other two cases. Operation was carried out in five cases of fracture of the shaft, beef-bone screws or plates being used if the fracture was oblique. In one case ends of the bones were engaged and the wound closed. There were two cases of fracture of the surgical neck and nine of fracture of the shaft treated by the closed method. None of the fractures of the humerus was compound.

*The Ankle:* There were eleven open operations on fractured ankles, in six of which beef-bone screws were used to fix the fragments. There were ten cases of fracture treated by the closed method. In certain types of fracture of the ankle, complicated Pott's fractures in fact, the open method is best. When the internal malleolus is broken through high up, so that the fracture involves the articulating surface of the tibia, it may be quite difficult to hold the malleolus in position. The beef-bone screws have been of great aid in such cases. In the fractures of the ankle complicated by a longitudinal fracture of the posterior portion of the tibia extending upward and permitting of posterior displacement of a portion of the articular surface of the tibia sufficient to allow the

astragalus to slip up into the cleft and the whole foot to be thus displaced backward, reduction is difficult (Fig. 3). If this longitudinal fracture is situated sufficiently far forward on the articular surface of the tibia, it can be readily seen that the rounded upper surface of the astragalus will not have any concave surface of the tibia left to hold it and the deformity will promptly recur when the traction is released. I have used the beef-bone screw to advantage here also to maintain the reduction of the posterior fragments (Fig. 4).

*The Tibia:* There were three cases of fracture of the tibia with no involvement of the fibula in which operation was performed, and seven cases treated by the closed method. When the tibia alone is fractured, satisfactory position is usually secured by the closed method, but the oblique, spiral, and comminuted fractures in the lower third of the bone usually demand an open operation. Beef-bone screws put through at different angles or a Parham band, which may be removed later, are sometimes useful.

*The Tibia and Fibula:* There were twelve cases of compound fracture of the tibia and fibula in which operation was carried out. In eight of these the injuries were so severe that debridement was necessary; at the same time the fragments were aligned. Two of these eight patients died, one from shock following extensive loss of blood at the time of the injury, and one from tetanus and gas gangrene. In one case amputation was necessary. In five the ultimate recovery was good. In the remaining four cases of compound fracture open operation was undertaken primarily to reduce the fractures. In two of these cases convalescence was stormy and complicated by infection; in one operation was performed the day of injury although it would have been better to delay; in the other operation was postponed but owing to the bad position it was finally performed earlier than seemed advisable. Two cases were held over long enough to exclude infection and the open reduction was followed by excellent recovery.

There were five cases of simple fracture in which the open method was followed because of malposition, the fractures being intractable and the closed reduction unsatisfactory for various reasons.

There were ten cases of fracture of the tibia



and fibula which were satisfactorily treated by the closed method.

*The Knee:* There were eleven cases of fracture of the patella, three of which were treated by the closed method (there being no marked separation of the fragments) and eight by the open method. In one case of compound fracture of the lower epiphysis of the femur involving the knee amputation was necessary. Of four cases of fracture of the articular surface of the knee joint, three were treated by the closed method and in one a compound fracture demanding debridement made open operation necessary.

*The Femur:* There were seventeen cases of fracture of the femur treated by the closed method more or less satisfactorily. From a review of the records and observation of the results, I believe that there were undoubtedly a few in which the open method would have been better.

Of fourteen cases of fracture of the femur operation was performed in thirteen because of malposition. One case, which was compound and comminuted, was complicated by gangrene of the foot and leg, necessitating amputation of the lower third of the thigh. Many of these cases were referred either because the primary reduction by their family physician was unsatisfactory, or because the reposition could not be maintained.

*The Hip:* Ten cases of fracture of the hip were treated by the closed method and one by the open operation. Recent fracture of the hip usually does not demand an open operation, as satisfactory reduction and reposition of the fragments can be secured by the Whitman abduction method. The one case in which the open method was used in this series was so treated because of the poor position following an attempt at reduction elsewhere ten days before; excellent reduction was secured by aid of a beef-bone peg. Unfortunately the patient succumbed to pulmonary embolism one month to a day after operation. I have, however, several times found it necessary to open the hip in order to obtain reposition of the fragments; normal function and perfect anatomic restitution have resulted. I do not believe that an open operation necessarily entails a greater risk of pulmonary embolism than reduction by the closed method.

## DISCUSSION

In most instances a fracture can be set satisfactorily if it is treated at once. Within a comparatively short time, swelling and muscular spasm are present and when reduction is tried, the ends of the bones cannot be engaged. In general, delay in reduction is, I believe, responsible for more faulty settings than any other one thing. Immediately after the fracture and particularly if the patient is anesthetized and relaxed, the ends of bones can usually be freed from muscle and properly engaged so that, if proper fixation is provided, the fracture site is in condition for the healing callus to form. Fixation is essential; it may be provided in many ways and should be as absolute as possible for the time it is necessary. Traction is probably the greatest single aid to the reduction of fractures and often it may be continued after reduction, and thereby aid fixation.

Whenever possible, a fracture should be reduced by the closed method. In this series many of the patients treated by the open method came late. This was regrettable because if callus is interfered with during its formation the process of ossification may be slow in re-establishing itself. All the soft parts were swollen, blood clots were undergoing organization, and a tendency to the formation of soft callus was present. Under such conditions an open operation is generally necessary. On the other hand, when a fracture is reduced at once, chiefly by traction and with the minimum of trauma, very little swelling ensues, because anatomic reposition restores normal tension of the muscles and blood vessels and obviates oozing with consequent formation of hematoma.

There is no doubt that, if the cases comprising this series had all been seen early, the percentage of open operations would have been much lower. These statistics, therefore, do not correctly express our views on the relative merits of the open and the closed method. Some of these cases of fracture were referred because delay in the primary reduction, which in many instances was unavoidable, had resulted in unsatisfactory setting. The time favorable for the closed method had gone by, the time for the open method had arrived, and operation became imperative.

Compound fracture may be so severe that debridement is necessary; reposition of the frag-



ments is attempted incidentally. The employment of internal fixation in the form of wire, metal plates, or beef-bone plates in such cases is generally disappointing and may result in serious infection. In the less severe cases, in which the ends of the bones may have merely protruded through the skin it is better to wait at least five days before carrying out any open operation to be sure that no infection will develop.

I have not hesitated to operate in any case of simple fracture at once if it seemed best, and I have no reason to regret it. The teaching that one should wait until the swelling has subsided and nature has established some sort of a barrier, is, I believe, without sound foundation.

There is no valid argument for the routine opening of fractures, for the results of conservative measures if properly carried out are quite good. From a review and study of 259 cases of ununited fracture, I found that nonunion and delayed union occurred most frequently in those fractures produced by severe, contusing, and devitalizing injuries.

Some comparatively recent experimental work that is of sufficient interest to warrant mention is that of Robison and his coworkers, who demonstrated to their satisfaction that there was an enzyme liberated at the site of fracture which acted on the phosphoric esters in the blood, causing a precipitation of the phosphate ions that united with the calcium to form calcium phosphate. They found this enzyme present in growing young bone, in the teeth of young animals, and in the kidneys. They also found that the enzyme worked best in a non-acid medium.

The work of Schwarz, Eden, and Herrmann, in Germany is of interest also. They showed that if bone was put into an amino-acid solution, such as glycolic acid, as much as 18 per cent of the calcium was withdrawn from the bone in as short a time as five days. Hematomas or dead tissue at the site of fractures following severe injury may lead by their autolysis to the formation of amino-acids. These amino-acids would have a detrimental action on the enzyme and would also tend to decalcify the ends of the bones. The beneficial effect of opening and cleaning out this material from the site of the fracture is obvious; and I believe that when there is extensive bleeding and hematoma formation at the site of a simple fracture, it would be better to

use the open method. We have no statistics to show that such fractures may go on to delayed union or nonunion, but I think that probably the percentage of such unfavorable results is higher in that type. At any rate, my study of the group of ununited fractures already referred to show that in a high percentage of the cases of ununited fracture as a group the injury causing the fracture was severe, contusing and bruising in nature.

#### TECHNIC

It is not difficult to set a recent fracture by the open method; indeed it is a pleasant contrast to the difficulties encountered in a case of old, ununited fracture. The most frequent cause of failure is inadequate postoperative fixation. Internal fixation or actual splinting on the bone may be necessary, but should be avoided whenever possible. Simple mechanics must be followed. It is not enough, however, to hold the ends only in contact; angulation must be prevented.

The too free use of metal, either in the form of plates, screws, or nails has been justly condemned, but it cannot be denied that many excellent results are obtained when metal is used. There has been a good deal of argument also regarding the necessity for excessive care in the preparation of the part, but ordinary, good, standard technic is sufficient. Outside of shaving the part the day before and putting on an alcohol dressing which is allowed to dry, we make no special preparation. I have no fear of shaving and preparing the extremity on the table just prior to operation. At the time of operation the part is painted with iodine or, if one prefers, with mercurochrome. The golden rule of surgery that tissues should be handled gently and with the least possible trauma is followed. We have not insisted on the "no touch" technic, although no quarrel can be had with it. We have gradually drifted more and more to the use of the beef-bone screws and plates as they are less irritating to the bone than metal and they are entirely absorbed. The rate of absorption varies with the bone metabolism. In some old cases of nonunion in which I have been unable to arouse the process of ossification, I have seen the bone screws remain in for three or four years, showing absolutely no change and lying inertly as foreign bodies. It is not necessary to place the screws through both cortices, for this offers no

mechanical advantage and, if infection does occur, it is a decidedly disagreeable condition to deal with as it means the involvement of the entire shaft.

It cannot be too strongly insisted that the postoperative fixation must be adequate and that the internal fixation must not be considered sufficient to hold the ends of the bones in correct alignment. There is no postoperative dressing that can compare to a properly applied plaster-of-Paris cast. It is possible in the lower extremity to carry on traction under the cast. It is probably safer to split the cast as soon as it hardens so that if swelling is sufficient to interfere with the circulation, relief can be quickly obtained by spreading the cast and cutting down through the dressing to the skin. I always use nonabsorbable skin sutures and these may be left in place for as long as five or six weeks.

No time can be set for the maintenance of the external fixation. The time for the removal of this must be governed by the clinical and roentgenologic examination of the part. Drainage is not necessary except in cases of compound fracture in which internal fixation is used through necessity, or in those cases in which for some reason infection is feared.

SUMMARY

Out of a total of 270 cases of recent fracture, 123 were treated by the open method and 147 by the closed. This does not reflect accurately my views on the relative value of the open and closed methods, as in many of these cases, seen after the time favorable for the closed method had passed, open operation was the only recourse.

Fracture of the clavicle, Colles' fracture of the wrist, and fracture of the hip rarely require open operation. In the majority of cases of fracture of both bones of the forearm, both bones of the leg, and fracture of the femur, the open method will probably give better results, because of the difficulty in engaging the fragments and maintaining the position.

Internal fixation is to be used when the fracture is of such a nature and the mechanics such that maintenance of the correct position is impossible without its aid.

The favorable time for setting is immediately after the fracture. Delay makes setting more

difficult and is the outstanding cause of the necessity for open operation.

Traction rather than manipulation should be the chief aid in reduction.

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METHOD EMPLOYED IN TREATING RECENT FRACTURES

Upper Extremity			
Bone	Open method	Closed method	Total
Hand	5	10	15
Wrist	0	17	17
Forearm	25 (radius 3; ulna 1; radius and ulna 21)	21 (radius 7; ulna 1; radius and ulna 13)	46 (radius 10; ulna 2; radius and ulna 34)
Elbow	19 (children 12; adults 7)	10 (children 8; adults 2)	29 (children 20; adults 9)
Humerus	15	11	26
Clavicle	2	11	13
Total	66	80	146

Lower Extremity			
Bone	Open method	Closed method	Total
Foot	1	1	2
Ankle	11	10	21
Leg	20 (tibia 3; fibula 0; tibia and fibula 17)	23 (tibia 7; fibula 6; tibia and fibula 10)	43 (tibia 10; fibula 6; tibia and fibula 27)
Knee	10 (patella 8; epiphysis of femur 1; articular surface 1)	6 (patella 3; articular surface 3)	16 (patella 11; epiphysis of femur 1; articular surface 4)
Femur	14	17	31
Hip	1	10	11
Total	57	67	124

SOME OBSERVATIONS ON THE ETIOLOGY AND TREATMENT OF PATHOLOGICAL BLOOD PRESSURES.

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During the last few years increasing attention has been paid to the question of pathological blood pressures which are after all but symptoms of disease. Some observations have been made on the hypotensive group and many on the hypertensive, especially on those cases associated with the syndrome known as hyperpiesia, essential hypertension, or hypertension with minimal renal lesions. The pathological blood pressures associated with valvular heart disease and the arrhythmias will not be discussed as their etiology, physiology and pathology is fairly well understood.

A better understanding of the factors that

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normally have to do with the regulation of blood pressure and of the physiology and anatomy of pathological blood pressure is needed before this problem can be solved. Studies of the capillaries by Krogh's method and of the capillary and venous pressures are adding to our knowledge of this subject. Necropsies on those known to have had pathological blood pressures, pressures constantly over 150 or under 110 mm. of mercury, or gradually rising or falling pressures, who have died as a result of the vascular disease or of some intercurrent infection or accident, are also sources of information. Thorough clinical studies carried on over a long period of years on the same patients, which should include records of regular periodic health examinations, will furnish the most valuable data for the solution of the blood pressure problem. Such clinical studies can only be made in communities in which the inhabitants are accustomed to consult the same physician whenever they are ill no matter what the trouble seems to be—that is in the smaller communities in which the general practitioners still holds sway. They cannot be made in the larger cities where the population is constantly on the move and has a different physician or specialist for every type of ailment and frequently patronizes the osteopaths, et cetera, in between times.

There are certain factors entering into the etiology of pathological blood pressures that, for the sake of brevity, will be stated rather dogmatically:

Heredity certainly plays a part in the etiology of pathological blood pressures, especially of the hypertensive group. The roll of heredity may be similar to its role in the allergic diseases<sup>1 2</sup> and carcinoma<sup>3</sup>; that is an hereditary sensitiveness to certain substances of animal, vegetable or bacterial origin. There is some evidence that habitus may be inherited and hypertension is more commonly found in overweight individuals and hypotension in those who are underweight and of the asthenic habitus<sup>4</sup>.

Pathological changes in the glands of internal secretion, whether due to malnutrition, infection or malignancy may be associated with pathological blood pressures: e. g., hypertension in connection with certain tumors of the suprarenals<sup>5 6 7 8</sup>, and in hyperthyroidism and hypotension in Addison's disease and hypothyroidism and

either high or low blood pressure in hypogonadism.

Pathological blood pressures are found in certain infectious diseases: namely, the hypertension in syphilis, the hypotensions in tuberculosis, typhoid fever, rheumatic fever, influenza and trichiniasis.

There is almost no evidence that the kidneys or liver, except as they may be the site of focal infections, are etiologically related to pathological blood pressures<sup>9 10</sup>.

It is well known that children, even after they leave home, continue the same habits of living and, more especially, of eating as do their parents and possibly also their grandparents at least on one side. So environment should be included as a possible etiological factor. Of the factors mentioned above, heredity and environment seem to be of most importance.

Focal infections from which organisms or toxins may be disseminated remain as the most important etiological factors<sup>11</sup>. It seems that dissemination of toxins from such foci is much more important than dissemination of bacteria. It has been known for many years that removal of infected teeth, tonsils, gall bladders, appendices, et cetera, or the adequate drainage of infected sinuses may be of great benefit in the treatment of certain cases of pathological blood pressures. The importance of such treatment has been more appreciated in connection with the treatment of the "rheumatic diseases" in which the dissemination of bacteria is of greater importance. It is quite generally admitted that such dissemination of bacteria may take place from the intestinal tract. Indican in the blood and urine is indicative of intestinal putrefaction and is disseminated from the intestinal tract indicating that other split products resulting from bacterial growth may be so disseminated.

The frequency with which intestinal stasis of many years duration is found in patients with pathological blood pressures, makes it seem probable that the dissemination of pressor or depressor substances from the intestinal tract may be an important etiological factor<sup>12</sup>.

Hypotension is found most commonly in such diseases as tuberculosis, especially in Addison's disease; in malignant disease; the anemias, both primary and secondary; trichiniasis<sup>13</sup>; typhoid fever; rheumatic fever; influenza and those forms of colitis with an intestinal intolerance for carbo-



hydrates in which the *B. Welchii* or *B. mucosus capsulatus* are found in excessive numbers<sup>14</sup>. Many of the above disorders are associated with marked intestinal tract pathology. Another observation pointing to the intestinal tract or its contents being related to pathological blood pressures, is the finding among the Bengali, Philip-pinoes, Cantonese and other southern Chinese of systolic blood pressures from 20 to 30 mm. below those of normal Europeans or Americans of the same age. The diet of such Orientals consists largely of rice and is very much poorer in protein content than is the diet of Americans or Europeans<sup>15</sup>. Hypertension is not as often found associated with any well defined disease as is hypotension. Chronic constipation, flatulence, reflex gastric distress are however often the only complaints of individuals who on examination are found to have systolic blood pressures of 200 mm. or higher. An acute intestinal upset in patients under observation, especially when accompanied by constipation will frequently cause the blood pressure to rise 40 or 50 mm. Flare-ups in other foci of infection will do the same thing. In both types the blood pressure returns promptly to its previous level when the acute trouble subsides.

There is much evidence that hypertension and arteriosclerosis may be produced in certain experimental animals by a diet high in proteins of animal or vegetable origin<sup>16 17 18</sup>. Such diets are as a rule decidedly abnormal for the species. Is the usual diet for those who develop high blood pressure, that is one excessive in amount, relatively high in proteins, and such that it leads to chronic intestinal stasis, a normal diet for man? Especially, as with the exception of that derived from milk or vegetables, the protein it contains has almost always been kept in cold storage and has undergone more or less putrefactive change before it is eaten.

It seems then that even though high protein diets under certain conditions may not cause blood pressure to rise<sup>19</sup>, intestinal stasis and putrefaction may serve as important etiological factors in the production of hypertension.

Hypotension appears to be due to the dissemination of depressor substances which cause a dilation of the peripheral vessels and a lowered capillary pressure though the venous pressure remains normal<sup>20</sup>. As pathological changes are rarely found in the blood vessels in necropsies

on those having had hypotension it seems probable that the depressor substances are neither directly or indirectly injurious to the vessels.

Hypertension is due to physiological changes in the vascular system at first not associated with anatomical changes. There is primarily a tonic contraction of the vessels, especially of the smaller arterioles and capillaries. This seems to be due to the action of pressor substances which may act centrally on the vasomotor center<sup>21</sup> or peripherally. A lessened flow of blood through the center brings about a compensatory rise in blood pressure. In some cases of advanced generalized arteriosclerosis with hypertension, sclerosis of the vessels leading to this part of the brain has been demonstrated<sup>22</sup>. Tonic vasoconstriction present over a long period of time results in sclerotic changes in the vessels, which gradually lose their elasticity and eventually may become calcified. These sclerotic changes are analogous to those found in skeletal muscles long in a state of tonic contraction.

The difference in the response of types of treatment that tend to eliminate the formation or dissemination of pressor substance; the difference in the ratio between the systolic and diastolic pressures<sup>23</sup>; and the differences in the response to such functional tests as the "cardio-respiratory test"<sup>24</sup> all point to there being in hypertension primarily a toxic vasoconstrictor effect, which, as the condition progresses, is complicated by permanent changes in the blood vessels that in the last stages dominate the picture.

Little is known regarding the nature of the pressor and depressor substances causing pathological blood pressures. There is some evidence that the guanidin bases<sup>25 26 27 28</sup> or other products of bacterial action on protein may be related to the pressor substances. Some may be endotoxins, some exotoxins, but there is more evidence that the pressor substances at least are split products of protein cleavage. The intestinal intolerance for carbohydrate found in some cases of hypotension might indicate that some of the split products of carbohydrate cleavage may have a depressor action. There is evidence that hystamine-like bodies may cause hypotension.

In the management of pathological blood pressures, treatment of the underlying cause is the only method of real value. Removal or drainage of foci of infection by surgical means and dietary and general hygienic management are

the most efficacious, unless specific therapy is available. Low blood pressures return promptly to within normal limits with recovery from or remissions in the underlying diseases. The treatment most effective in those cases associated with a "gas bacillus colitis" and an intestinal intolerance for carbohydrate is a maintenance diet containing a minimum of carbohydrate and no sweet milk or lactose but a pint a day of butter milk or preferably acidophilous milk<sup>14</sup>.

The diet found most effective in the management of hypertension is one containing about 0.75 grams of protein per kilo of body weight in which the major portion of the protein is derived from milk or casein and so less apt to undergo putrefactive changes; sufficient fat and carbohydrate to give an adequate caloric value; fruit and vegetables in sufficient amounts to regulate the intestinal tract and a minimum of salt and other condiments<sup>29</sup>. It is interesting to note that those who consider dissemination of bacteria or toxins from foci of infection outside the intestinal tract<sup>11</sup> or deranged sodium chloride metabolism<sup>31</sup> as the most important etiological factors in hypertension, all recommend such a diet which will alter the intestinal contents and overcome intestinal stasis.

Rest and relaxation<sup>33</sup> produced by sedative, if necessary<sup>11</sup>, gradually increasing mental and physical exertion, and sunlight, direct or artificial, are also of great value in the management of pathological blood pressures.

Calcium salts<sup>12 33</sup> alone, or in combination with potassium<sup>34</sup> have been found beneficial in the management of hypertension. They seem especially valuable in the treatment of those individuals who refuse to follow a diet but are willing to take medicine. Their action is due largely to their effect on the permeability of membranes which results in a lessened dissemination, or increased elimination, of the pressor substances. In this connection the action of sodium is antagonistic to that of calcium which may account for the apparently harmful effect of sodium chloride<sup>31</sup>.

Lactose, which is slowly absorbed from the intestinal tract and so tends to make its contents aciduric rather than putrefactive is also of value in the treatment of hypertension though its use is contraindicated in many cases of hypotension. Its action is beneficial in part from its effect on the intestinal contents and in part from

its increasing absorption of calcium from the intestinal tract<sup>35 36</sup>.

Of late, liver extracts have been having a great vogue in the treatment of hypertension<sup>37 38</sup>. Their action seems to be due to their containing cholin or hystamine or other depressor substances that neutralize but do not destroy or prevent the formation or dissemination of the pressor substances. They do cause rapid reduction in blood pressure and so lessen the chance of cerebral accidents.

## SUMMARY

Pathological blood pressures as symptoms of vascular disease may be due to one or more of several factors. Foci of infection and changes in the intestinal contents, resulting from improperly balanced diets, either of which may result in the dissemination of organisms or of pressor or depressor substances, exogenous or endogenous in origin, plus an hereditary sensitiveness to such substances, are the factors most frequently encountered. The methods of treating pathological blood pressures found most effective are those directed toward the removal of the source of said toxic substances aided by the administration of substances that lessen their dissemination, increase their elimination, or neutralize their action. Rest, relaxation, sunlight, graduated exercises and improved hygiene in general are also valuable therapeutic measures.

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### DISCUSSION

Dr. E. W. Crum, Waverly: I would like to ask the doctor if in a case of nephritis with systolic blood pressure of 300 he would recommend giving the calcium salts in view of the fact that the underlying cause of this systolic blood pressure is the nephritis; whether with such a hypertension it would do any good to administer the calcium salts before the nephritis is cleared up.

Dr. T. D. Cantrell, Bloomington: I am a little disappointed this morning. I have reached the age of 62. I was just hoping some of these fellows would find a way to help me out. I have a blood pressure of 135 now. And the reason for the blood pressure, if you will allow me to be personal a little bit, is that my father and his three brothers weighed an average of 270 pounds apiece. At 30 years of age I weighed 200. I got it down. And I have been on a diet ever since. May be that is why I have not a high blood pressure. I have limited my diet all my life.

There is one thing I wanted to speak about this morning especially, and that is the calcium fixation of the blood as it is influenced by sunlight. Many of us misunderstand the use of sunlight. There are less than 200 square inches of the skin exposed to the sun, even on the golf course. We think we are getting a sun bath, but we are not. In this civilized country where we have lots of smoke and dust and ashes, and everything else in the atmosphere, the actinic ray is filtered out of the sunlight. We get very little benefit of the sunlight as it comes to us. Not two per cent of the actinic ray comes through glass. We think when we get it through glass in the summer time we are getting a real sun bath. We are getting warm from the sun, and that is all.

The artificial sunlight, to my mind, is a great boon to humanity along these lines. A patient in a nude condition can get more sunlight in fifteen minutes from the artificial sunlight which comes to us in pure form and we do get a real calcium fixation in the blood, as has been demonstrated many times in laboratory tests and tests on animals.

In that matter I feel that there is room for just a little bit of enthusiasm. I realize myself we should not get too enthusiastic about any subject, because after a while somebody will jump up and prove we are in error. The trend of things now seems to be that sunlight properly administered to the whole body does have a tendency of calcium fixation of the blood.

Dr. W. C. Blaine, Tuscola: I would like to ask Dr. Davis just a question or two regarding his paper. I have a wife who has gone through with this line of trouble for a number of years and she has been to see

the Mayos, Tice and various others. She is fifty-five years of age and three years ago she weighed 156 pounds, and had a blood pressure of near 300. She began going down in weight until she reached 93 pounds.

I have given her continuously for one year, large doses of calcium lactate, which I think has done a great deal of good. This coupled with the use of liver extract (Hypermore), and with this I have given her Nitroscleran, E. Tosse & Co., Inc., a German made preparation for the sclerosis that accompanies her hypertension. All of which I believe has produced quite a softening of the arteries and has done a great deal for the hypertension.

She is now coming back and has reached 120 pounds in weight. Of course, we removed all foci of infection which was particularly the cause in her case, that is the teeth, the tonsils and had gall bladder drainage.

Dr. Nathan S. Davis, III, Chicago (closing): I have a feeling that very likely in your case the nephritis and blood pressure are due to the same cause rather than that the blood pressure is due to the nephritis. I think that is probably an answer for the association of the high blood pressure with nephritis. There is the formation of some toxic material that is pressor in action and particularly destructive to the kidney tissue, and perhaps in part due to its action on the blood vessels of the kidney.

I have tried the calcium salts in several cases with very markedly high blood pressure. It brought the pressure down considerably but not down to normal. I imagine calcium lactate by mouth could not possibly do any harm. You perhaps get more benefit if you give equal parts of calcium lactate and lactose than with the lactate alone.

I agree with the doctor about the artificial sunlight. I have been using it but a short time. I have not had enough experience to say anything about it.

In one case, it seemed to have a particularly good effect on lowering diastolic blood pressure. The patient had a cerebral accident a few years ago. Since then his pressure has remained most of the time systolic between 160 and 180, and diastolic between 120 and 140. Last November he went to Bermuda and put in quite a bit of time on the beach in a bathing suit where he was getting an extensive real sun bath. The doctor accompanying him on the trip took his pressure occasionally and his systolic was down to 160 and his diastolic down to 120 for the first time.

So when he returned, I watched him for a while and his pressure commenced to go up a little, especially the diastolic. I had him take the quartz light treatment. Again his diastolic dropped below 120.

To return to the first case. In these very high blood pressures, I think that the liver extracts would be even more effective than the calcium in bringing the pressure down because of their neutralizing the pressure substance with depressor substance. If you give sufficient quantities you will get a distinct softening provided the arteries have not completely lost their elasticity, because you may be giving depressor substance in excess of the amount required to neutralize the



pressor substance, though the pressure as a rule does not return entirely to normal.

I have had no experience with the nitroscleran. The only remark I would make about that is as a general proposition it seems to me that you cannot give as large doses of calcium lactate or iodides or anything else when you give them hypodermically or intravenously as you can by mouth. If you give calcium lactate with lactose and possibly with the addition of the quartz light or direct sun baths, I think the administration by mouth is more valuable than the other methods.

## A CLINICAL STUDY OF ACUTE INTES- TINAL OBSTRUCTION

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Practically no progress has been made during the last 25 years in the early diagnosis and treatment of acute intestinal obstruction so that this condition with its mortality of 50% still remains one of the darkest chapters in the field of modern surgery. (W. Taylor<sup>31</sup>). The poor results obtained in the treatment of acute intestinal obstruction have stimulated renewed efforts with the result that several interesting observations have recently been reported which throw some light on the pathology and this in turn resulted in several new suggestions in the management of these cases. We have applied some of these new principles with the result that the mortality has been considerably reduced and we have made a survey of all cases of acute intestinal obstruction admitted to the Cook County Hospital in the last 6 years with the hope of gaining additional information which may be of further use in reducing our mortality.

During the past 6 years there were nearly 900,000 admissions of all sorts to the wards of the Cook County Hospital. Acute intestinal obstruction was present in 221 cases or in about half of one per cent. Not all of these cases were suitable for this study so we selected only those cases of acute, mechanical, intestinal obstruction which were operated upon. These formed a series of 95 cases. The incidence of acute intestinal obstruction in our hospital is surprisingly low when we consider the fact that it is a general hospital

to which all sorts of cases are admitted but we have learned that intestinal obstruction is comparatively more rare than the text-books would lead us to believe.

The obstruction occurred in 42 males and in 53 females. This may be explained by the relative frequency of pelvic operations in women, a factor which will be shown later to be of very great importance. 47 patients were white and 48 were colored and since from two-thirds to three-quarters of our patients are white we can offer no definite reason for this apparent greater incidence in colored people. The ages during which obstruction occurred were as follows:

Up to 20 yrs. there were 11 cases.  
From 20-40 yrs. there were 41 cases.  
From 40-60 Yrs. there were 32 cases.  
Over 60 yrs. there were 9 cases.

These statistics agree in general with those furnished by other authors and can perhaps be explained in part by the fact that operations and post operative obstruction, which is the most frequent form of intestinal obstruction, occur chiefly between the ages of 20 and 40.

A study of the cause of acute intestinal obstruction showed the following:

Post Operative Adhesions or Bands.....	74 cases
Strangulated Hernia .....	7 cases
Intussusception .....	6 cases
Carcinoma of the Bowel.....	2 cases

and one each of twisted omentum, Richter's hernia, gall stone obstruction, pressure by abdominal aneurysm and mesenteric thrombosis.

Post operative adhesions were the cause of obstruction in 78% of our cases and was by far the most common cause of intestinal obstruction in our series as well as in those reported by other observers. (J. B. Deaver,<sup>7-8</sup> H. A. Kelly and C. P. Noble,<sup>23</sup> J. B. Deaver and G. G. Ross.<sup>9</sup> Acute obstruction occurred at variable periods of time after operation; from a few months to as long as 19 years. The great majority of patients were free from all symptoms until the onset of the acute attack requiring operation. It is difficult to explain the long period during which the patients were free from symptoms as the adhesions undoubtedly developed soon after operation. It is possible that the adhesions and bands contract very slowly until a time comes when the constriction is tight enough to produce obstruction and when the muscular power of the bowel becomes insufficient to overcome the obstacle. Another cause may be loops of bowel which become constricted by suddenly slip-

ping behind bands. The great lesson to be learned is to spare the peritoneum during operation and to cover all raw surfaces if we wish to spare the patient the danger of possible future obstruction. Similar observations were made by C. F. Horine,<sup>21</sup> and K. Herndorfer.<sup>20</sup>

An interesting feature which impressed us during a study we made of 60 cases of carcinoma of the colon was the fact that about one-third of these began with a sudden onset resembling acute intestinal obstruction. An acute onset has also been frequently observed in carcinoma of the rectum and we must not overlook the possibility of these conditions when confronted with a picture of acute ileus. It is very important to examine the rectum digitally and even to use a proctoscope if necessary if we wish to recognize these cases which begin in so atypical a manner.

The nature of the preceding operation was as follows:

Appendectomy, 26.  
Pelvic operation, 24.  
Laparotomy, nature unknown, 6.  
Operation for gun shot of abdomen, 4.  
Strangulated hernia, 3.  
Hernia not strangulated, 3, chiefly ventral.  
Gastric ulcer, 1.  
Gall bladder operation, 0.

It is interesting to note that operations in the upper half of the abdomen were seldom followed by intestinal obstruction while 56 cases, or over 83% of our series who were operated in the lower half of the abdomen, developed intestinal obstruction. Similar observations were made by L. Schönbauer.<sup>30</sup> This may be accounted for in part at least, by the presence of more intestine in the lower half of the abdomen and perhaps also to the fact that septic operations are much more common in the lower abdomen and pelvis. Infections do not account for all post-operative adhesions as many cases of obstruction followed the removal of a non-septic appendix or occurred after hysterectomy or some other clean operation.

The location of the obstruction is of importance as the surgeon must know the places where the condition is most likely to occur in order to find it rapidly unless there are definite signs pointing to the exact site. The usual site was in the lower portion of the ileum, being present in this location in 67 cases or in 70%. The other regions of the bowel were affected as follows; Sigmoid 7, not noted 6 (mostly strangulated hernia), ileocecal 4, cecum 4, jejunum 4, hepatic flexure 2 and duodenum 1. Obstruction was located 68 times in the right lower quadrant of the

abdomen, 6 times in the umbilical region, 5 times in the pelvis, 4 times in the left lower quadrant and only once in the right upper quadrant. The incidence in the various locations can be explained by the site of the preceding operation which is usually in the right lower quadrant or in the pelvis.

A study of the clinical picture did not shed new light on the nature of the pain. Our experience coincided with that of H. R. G. Poate<sup>28</sup> in that the pain is generally at first sharp, and not localized to any definite region of the abdomen. Later the pain becomes colicky and intermittent due to the exaggerated peristalsis and finally peritonitis sets in with constant, stabbing pain marked tenderness and rigidity. Our attention was drawn to the fact that patients sometimes blame some dietetic error for the onset of their symptoms and this may cloud the diagnosis if the usual sequence of pain, vomiting and constipation is replaced by an attack of nausea and vomiting several hours before the pain sets in, as occurred in 5 of our cases.

Vomiting was present in 90 cases and was absent in 5 instances. Vomiting which was apparently feculant occurred 25 times. We could not determine any special characteristic of the vomiting but we were impressed with the fact that apparently feculant vomitus was not only a significant sign of intestinal obstruction but was also evidence that the case went much too long without surgical relief and that the prognosis was very poor.

Constipation was present in 80 cases, the bowels were normal in 6 and diarrhea was present in 1. No data was obtained in 9 instances. Flatus could not be passed in 41 cases and repeated enemata were without result in 54 patients. Fecal matter was obtained in 11 cases. Bloody stools or blood in the enema water proved very significant of intussusception. The foregoing shows that absolute constipation; ie., constipation, absence of flatus or fecal matter with an enema are highly significant of intestinal obstruction but that bowel movements may be present in a considerable number of cases especially if the obstruction is rather high.

Peristalsis was visible or audible in 67 cases, not mentioned in 20 instances and absent in 8. The presence of peristalsis is a good prognostic sign as it shows that severe peritonitis with paralytic ileus has not as yet occurred. (E. M.



Ellis,<sup>11</sup> W. Korte<sup>24</sup>). Visible peristalsis is a very important diagnostic sign and may occur either early or late but we should not wait to observe this phenomenon as too much valuable time may be lost. Much has been written about the auscultatory sounds and R. St. L. Brockman<sup>2</sup> describes a peculiar metallic tinkle which occurs in obstruction, a sign also mentioned by J. B. Deaver who adds that it occurs very late in the course of the disease. The great value of either audible or visible peristalsis lies in the fact that it is present in dynamic obstruction and not in adynamic ileus and hence is a sign of considerable prognostic significance.

Distention was present in 83 cases and absent in 12. This sign is of value in diagnosis and may be useful in determining the duration or location of the obstruction as it has been our experience that low obstructions are more likely to cause a more marked degrees of meteorism while high obstructions are more likely to cause severe intoxication and collapse.

The white blood count was of some help. A definite leukocytosis was present in 53 cases and a normal white count in 17. The average in all cases where a count was made was approximately 15,000. The white count gave no positive information as to the prognosis as the proportional mortality was no greater in those with a high white blood count than in those with a normal count.

X-ray examination did not prove of great value to us because only 9 out of 19 cases examined showed definite evidence of obstruction. We believe that the fault was ours and that x-ray can be made a very valuable diagnostic criterion if used with judgment. We now use the method suggested by J. T. Case,<sup>4</sup> of taking a flat plate and looking for the "ladder," pattern of distended coils of intestine above the site of obstruction. Experience has taught us that such a series of parallel loops of distended bowel, high in the abdomen suggests obstruction rather high in the small intestine while a similar finding in the middle or lower half of the abdomen suggests that the constriction is in the cecum or lower ileum. When doubt exists as to whether the distended loop is small or large intestine a small amount, about  $\frac{1}{2}$  oz., of barium in water may be given per mouth. The small bowel will take on a peculiar

feathered appearance while the distended colon will show the characteristic haustral markings.

Another sign which proved of value was one described by Gold,<sup>12</sup> and consists of the palpation of several loops of small bowel in the cul de sac of Douglas. This sign is present in low obstruction of the small bowel and has been of considerable diagnostic help.

The mortality rate was approximately that reported by other authors, being 41%. An interesting light is thrown on the mortality rate when studied in relation to the duration of the illness.

Duration under 1 day.....	Mortality	3 cases
Duration from 1-2 days.....	Mortality	2 cases
Duration from 2-3 days.....	Mortality	2 cases
Duration from 3-5 days.....	Mortality	17 cases
Duration over 5 days.....	Mortality	15 cases

A definite increase in the death rate is evident and is a conspicuous argument for earlier operation. (W. S. Handley<sup>13</sup>, H. T. Tuttle<sup>32</sup>). Duration of the illness, while probably the most important factor is certainly not the exclusive feature determining the death rate. A great deal depends on the presence or absence of strangulation with vascular involvement, especially of the mesentery and the presence or absence of gangrene. Gangrene was noted on the histories of 14 cases and 11 of these died. The outlook also depends a great deal on whether the gangrene or vascular occlusion was sudden or gradual; the former being much more serious (H. B. Eisberg<sup>10</sup>).

A very important factor is the production of toxins in the mucosa above the obstruction. The toxin is more potent the higher the obstruction and it is very important to remove this toxin before serious damage has been done (W. E. Lee, and T. McK. Downs,<sup>25</sup> A. McGlannan,<sup>27</sup> E. Cornils,<sup>6</sup> D. Lewis<sup>26</sup> and S. Bunnell<sup>3</sup>). Recent studies by T. Ingvaldsen;<sup>22</sup> G. H. Copher and Brooks,<sup>5</sup> S. Pringle,<sup>29</sup> S. Bunnell point to the probability that this toxin is a product of proteid decomposition and is formed in the mucosa of the proximal loop. R. S. Haden and T. G. Orr, 14, 15, 16, 17, 18, 19, have found that the blood chlorides fall rapidly before the toxic symptoms occur and they believe that administration of chlorides is of value in preventing the serious effect of the toxin. They have been able to prevent poisoning by the toxin and to greatly help experimental animals by the administration of sufficient chlorides to maintain the normal level in the blood. Similar results have been attained clinically in human beings. They recommend the



subcutaneous administration of normal saline or better 3% salt solution until the blood chlorides reach the normal level. The initial dose of Na. Cl may be 1 gram per kilo of body weight and glucose may be added, especially if given intravenously (F. A. Bothe<sup>1</sup>). The salt solution may also be given intravenously or per rectum with identical results. We can corroborate the good results obtained by the use of Na Cl and we use it both before and after operation.

The treatment of acute intestinal obstruction may be divided into three headings depending on the general condition of the patient and on the duration of the illness. In an early case with the patient in good condition the indication is for immediate laparotomy with release of the obstruction. In the later stages with permanent injury to the bowel wall and the patient still in good condition we try to resect the involved portion and to follow this by an anastomosis. Enterostomy proximal to the obstruction has proved of great value in our hands in that it provides immediate and free drainage for the bowel contents as well as for the toxins which have formed above the obstruction. In the very late cases in which the patient is very ill and in which gangrene is present we perform a simple enterostomy above the obstruction and follow this by general supportive measures and the administration of large quantities of salt solution as previously described. More extensive operations including the release of the obstruction and union of the affected bowel is performed several days later if the patient survives.

The pre and post-operative treatment consists in brief of the following: Gastric lavage immediately before operation. Salines are pushed as much as possible and are given under the skin, in the veins and per rectum. Local anesthesia is used wherever possible. The post operative treatment consists of gastric lavage and continuous duodenal drainage by means of a Rehfuß tube together with a constant administration of salt solution as previously outlined. Heat and stimulants are used as needed.

#### RESUME

1. A series of 95 cases of operated, mechanical, acute, intestinal obstruction is reported.

2. Acute intestinal obstruction was due to post operative adhesions or bands in 78% of all cases. The obstruction occurred from a few months to 19 years after operation and the great majority

of these cases were free from all symptoms until the onset of the actual obstruction.

3. More than half of the obstructions following operations were due either to appendectomy or a pelvic operation. There was a striking freedom from obstruction following operation in the upper half of the abdomen. A large number followed so-called "clean operations."

4. The lower portion of the ileum was involved in 70% of the cases and the usual location of the obstruction was in the right lower quadrant of the abdomen.

5. A characteristic of the pain was its intermittent colicky nature in the early stages before peritonitis had set in.

6. Genuine fecal vomiting was never present but a foul odor and vomitus which was apparently feculant occurred in 25 instances. While this is an important diagnostic sign it is also evidence that the condition has been allowed to progress for too long a time.

7. Peristalsis, either visible or audible, was present in 67 cases and was considered a good prognostic sign indicating that severe peritonitis or paralytic ileus had not yet occurred.

8. X-ray examination was not of great help in our series probably because we did not make the proper use of this diagnostic measure. We were impressed by the value of the findings of the so-called "ladder pattern" caused by the distended loops of bowel above the obstruction and easily seen on flat plate without the use of barium.

9. Our mortality was 41% which is slightly lower than that usually given for this condition. Our studies showed a marked increase in mortality after the third day. The presence or absence of gangrene or strangulation of the mesentery is of immense significance in the ultimate outcome.

10. The treatment consists essentially of gastric lavage and forced administration of saline solution before and after operation. Removal of the obstruction or of the gangrenous area is attempted only when the general condition of the patient is good. Simple enterostomy alone is performed where the general condition is poor and more detailed operative procedures are left for a somewhat later date after the toxicity is reduced and the general condition of the patient improved.

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## RENAL INSUFFICIENCY AND ITS TREATMENT\*

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The function of kidneys is to keep the composition of blood in normal level. Renal insufficiency is the failure of the kidneys to perform this function properly. Normally there are three times as many kidney cells as are needed to keep blood in its natural state of purity. As long as one-third or more of the kidney substance remains intact, there will be no insufficiency. Practically in all cases, destruction of kidney cells has gone on for a long time, steadily narrowing the margin of safety and eventually destroying it entirely, before signs and symptoms of insufficiency appear.

Kidneys excrete two classes of substances. Class 1 are the substances that are useful in body economy, such as sugar, salt, water, hemoglobin, diastase, etc. These are called threshold substances because normally excess over certain amount is excreted. Class 2, are waste products of metabolism, such as urea, uric acid, drugs and all other foreign substances which are ex-

creted as rapidly as they are thrown into the blood stream.

According to Cushman this is what happens. As blood passes through the glomeruli of the kidney most of its fluid part filters out through the flat cells of Bowman's capsule into the tubules, carrying with it all its soluble constituents, colloids only remaining behind, as this filtrate travels down the tubules, water is reabsorbed by the columnar cells lining them and with the water pass in useful substances like sugar, salt, etc. Waste products are left in the tubules to concentrate, finally passing out to the renal pelvis as urine. In the resorption, however, only a certain amount of any useful substance can be taken back by the columnar cells, any excess of it having to pass out with the waste products into the urine. This constitutes the threshold of kidney. The threshold is lowered at times, as in the case of febrile and functional albuminurias and renal glycosuria. It may be raised as in the case of diabetes, when urine is sugar free but blood sugar is high.

To clear understanding of chronic nephritides and renal insufficiency, the following clinical grouping by Christian is helpful.

Group 1. Chronic nephritis with edema.

Group 2. Chronic nephritis without edema.

Group 3. Essential vascular hypertension progressing into chronic nephritis.

There is warrant for group 3, but at the state of renal insufficiency, it would be difficult to say how important a role blood vessels and heart play in the drama. Christian says "obviously there is relatively very little difference between groups 2 and 3 of chronic nephritides, although to separate them when possible seems to be advantageous." For the purpose of this paper and in order to emphasize certain important points, group 3 will be ignored.

In chronic nephritis with edema, insufficiency is for water and sodium chloride. Volume of urine is small; specific gravity and urea content are high. There is nocturia, and blood pressure is low, or only moderately elevated.

Purely nephritic edemas are comparatively few in number. In the majority of edematous cases the cardiac insufficiency co-exists with that of the renal, and is the cause of the edema.

In chronic nephritis without edema, specific gravity of urine is low and fixed. There is marked

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retention of nitrogenous waste, nocturia and high blood pressure. Salt excretion may be diminished. The great majority of nephritides belongs to this class.

Most of the signs and symptoms ordinarily ascribed to chronic nephritides belong to the state of insufficiency. The diagnosis of insufficiency is comparatively easy and diagnosis of nephritis at pre-insufficiency stage may be quite difficult. Edema of eyelids, face and ankles, pallor of face, morning headaches, indefinite digestive disturbances, loss of memory, strength and ambition, numbness of finger tips, mental change, change in volume of urine, fixity of specific gravity, disturbances of micturition, etc., are coincident with and due to renal insufficiency.

Nocturea means that kidneys are working overtime and the rest of the symptoms mean that they are not able to keep blood at its proper level of purity.

There are many kidney function tests; the simplest and the most helpful ones are specific gravity and water excretion test.

Give patient 1500 C. C. of water before breakfast. Urine excreted in 4 hours should amount to about 1000 C. C. normally. To test capacity of the kidneys to concentrate, allow patient the standard diet but cut off all liquids for 24 hours. During this dry diet period instruct the patient to void urine every 2 hours during the daytime and save each specimen separately and save night urine as one specimen. Each specimen should be measured and its specific gravity noted. Then all specimens are mixed, the amount noted and specific gravity determined.

Normally day urine should be 2 to 3 times as much as the night urine. Specific gravity of night urine should be 1015-1020. Normally specific gravity should vary about 9 points or more between the highest and the lowest.

In office practice 6-9 A. M. specimen of urine is quite satisfactory. Patient should be instructed to abstain from food and drink from 8 P. M. till 9 A. M. next morning. Bladder should be emptied 6 A. M. and urine discarded, and again at 9 A. M. and urine bottled for examination. 6-9 A. M. urine should be small in volume and high in specific gravity, at least above 1020.

In this manner we can learn the degree of the

concentrating power of the kidneys, fixedness or variability of the specific gravity, and capacity of the kidneys to excrete water and nitrogenous waste. According to Chas. E. M. Fischer, outside of few exceptions, there is a constant ratio between concentration of urine and elimination of urea. In health with ordinary diet and average amount of fluids taken, kidneys should concentrate urine to about 1022. If less liquids are taken, specific gravity should be higher, if more, lower.

In renal insufficiency specific gravity is fixed. In cases with edema, it is high and in those without edema, low. Ingestion of more or less water does not alter it. Capacity of the kidneys to excrete salt and urea may be tested by first controlling the diet and finding the level of these substances in the urine. Then 10 Gms. of urea or sodium chloride may be given and urine tested. Normally most of the added urea and salt should be eliminated in 24 hours and all of it in 48 hours.

Functional tests of this type are not really necessary and may prove harmful.

Among foreign substances used to test kidney function, phenolsulphonephthalein is the best known and most often utilized. 50-80% of the dye should be excreted in the urine during 2 hours, and the amount excreted during first hour should be 75% of the total for 2 hours. In the aged, 30-40% may be considered normal. One should be careful to inject the dye into the muscle and also remember that sodium and magnesium sulphate interfere with this test.

Phthalein test, supplemented with specific gravity and water test would give the necessary information as to the kind and number of insufficiencies, in all but exceptional cases.

At times blood urea nitrogen test may be made, with some additional advantages.

It must not be forgotten that the presence of casts and albumin, high percentage of blood urea nitrogen, uric acid, creatinin and retention of sodium chloride and water may be due to acidosis, intestinal and other toxemias, prostatic obstruction and cardiac insufficiency, in fact to any cause producing toxic depression of kidney cells and not to actual destruction of the cells themselves.

*Treatment of renal insufficiency. Prevention is*



the best treatment. Therefore it is of tremendous importance to recognize chronic nephritis early. This can be done in the great majority of cases, if not in all. Careful study of the case, history, familial tendency to nephritis, history of scarlet fever, diphtheria, intestinal and other infections, prolonged suppuration, renal disturbances in pregnancy, presence of diabetes, frequent exposure to toxic substances, excessive protein and sodium chloride in the diet and habitual overeating and over drinking are suggestive and should direct the physician's attention to the kidneys. Repeated uranalyses should be made, examine for albumin, red blood corpuscles, leucocytes, casts, fat droplets, indican, large number of kidney epithelii and bacteria. Examination of eye grounds and determination of blood pressure, abnormality in quantity and appearance of urine may help complete the diagnosis. Pain is not a prominent symptom in chronic nephritis, unless kidney becomes too large for its capsule or stone is present. The pain may be felt in lumbar region, above the crest of ilium and follow the course of the ureters, down to bladder, glans and inside of upper thigh or may cause pain and rigidity over the abdomen on the same side as the affected kidney. Exceptionally painful symptoms may locate on opposite side.

The diagnosis of chronic nephritis having been made, dietetic treatment should be instituted without delay.

The deleterious effect of excessive intake of protein, over long periods of time, had been observed by clinicians many years ago and the idea had been reflected in the diet prescribed to those suffering from nephritis and renal insufficiency. Sodium chloride and water also had been similarly incriminated and in their turn had afforded foundation for salt free diet and methods of desiccation.

In recent years through animal experimentation and other modern laboratory methods similar conclusions have been arrived at. Among the experimenters in our country the names of Newburg, Marsh, Rockwood, Barrier, Andrews, Anderson, Foster, Leiter, F. M. Allen and his associates may be mentioned. Few of their conclusions pertinent to our subject may be briefly given.

High protein diet causes hypertrophy of kid-

neys in normal rabbits. After partial nephrectomy, excessive protein feeding has given rise to hypertrophy and to symptoms of insufficiency. In dogs after total nephrectomy intravenous injection of urea will cause symptoms similar to uremia and sodium chloride injection will bring on eclamptic attacks simulating eclamptic forms of uremia.

Dogs can bear uranium nitrate 2 mgs. to each kilogram of body weight, without developing dangerous renal symptoms but if they are fed heavily on protein and table salt, death will ensue as though they had been given a lethal dose of the poison. Partial nephrectomy not fatal in itself will prove so, under heavy protein and sodium chloride feeding. Protein ingested into the animal body splits into a group of amino acids before assimilation by the cells. At least seven of the group have induced something akin to glomerulonephritis in rabbits.

Then clinical and laboratory experience alike tend to prove that, primarily, injury due to infection and intoxication and secondarily long lasting functional overstrain are the causes of chronic nephritides and renal insufficiency.

All human beings must run a gauntlet of many infections and intoxications. With few exceptions if any, all of us had our kidneys damaged during the earlier years of our life, and disintegration has been going on since, though probably at a slower rate. Add to this many years of functional overstrain and you have the situation made reasonably plain.

What are the effects of many years' excessive consumption of food in general and that of protein and salt in particular on the healthy digestive canal, liver, blood chemistry, heart, vascular system and kidneys? Naturally animal experimentation could not throw much light on this point. We know that the life of cells and the number of times they can be replaced, have their limits.

In health the amount of protein in our daily ration should not exceed the proportion of one gram to one kilogram of body weight. It should be below that in persons of sedentary habit and in those where there is history of severe or repeated infections. The proportion may be larger in the growing period of life and in convalescence from exhausting diseases. American diet-

ary includes protein far in excess of body needs.

Sodium chloride is necessary in animal physiology. Two grams of it a day would meet the physiological needs of human economy in the way of hydrochloric acid for digestion and replacement in blood and other tissues, while average American dietary contains 15-20 grams of salt daily.

There is no provision made in the human body for the storage of proteins and sodium chloride. In health the amount of non-protein nitrogen and sodium chloride daily eliminated in the urine is but a few grams less than the amount ingested the day before.

Digestion, assimilation and elimination of proteins require a large amount of water. Excessive salt consumers are also excessive water drinkers. It is not a mere accident that renal insufficiencies are for protein metabolites, sodium chloride and water.

Because of profound change in body chemistry, there may be formed new chemical compounds that act as toxins and they may be beyond the capacity of the kidneys to excrete.

In insufficiency with edema, indications would be for salt free diet with restrictions of water.

After the blood is rid of the accumulation, lack of sufficient salt may interfere with body physiology, therefore the addition of 2-3 gms. of salt to daily ration would be necessary.

When renal insufficiency is for protein waste, interdiction of nitrogenous foods for a while would be in order. A few days fasting followed with Karrell diet would be helpful. But remember that the waste locked up in the blood could not nourish the body, therefore about 40 to 50 gms. of protein should be included in the day's food allowance. It is unwise to starve the very cells whose activity you are hoping to promote.

In feeding these patients, fresh fruits, specially citrus fruit, and fresh vegetables are essential. The diet should contain all of the vitamins. Exclude all classes of canned foods, spices, highly seasoned sauces, asparagus, mustard, rhubarb, radishes and onions. Amount of potatoes better be restricted, specially if they are served baked. In some cases, vegetables may have to be boiled and strained before they are served.

In insufficiency without edema a rather liberal amount of water may be allowed, provided that output fully accounts for the intake. Restricting

water may be dangerous by increasing the concentration of toxic substances held in the blood.

Sweating eliminates water, salt, minute quantities of protein waste and possibly other toxic substances. As to frequency and duration of sweats, one should be guided by the effect they have on the patient.

Diuretics should be used with great care. They may be useful when edema is present and there is no retention of nitrogen urea and creatinin. Alkaline diuretics may be tried. They should not be continued if they produce no diuresis. They may be held in the blood and add to the burden of the kidneys.

In the treatment of renal insufficiency catharsis has a place. It should not be overdone. If salines do not act promptly, they are absorbed into the blood. Administer another cathartic, preferably of vegetable origin. The caffeine group of diuretics, such as diuretin, theophyllin, etc., may be administered intermittently.

Lately calcium has come into use, in the treatment of edema of both glomerular and tubular nephritis. While administering it, sodium chloride and water should be restricted. It is given in large doses with interruptions. Calcium lactate is given in daily doses of 12-18 gms. or calcium chloride half that of lactate. It seems that calcium frees sodium chloride and water from tissue colloids in some manner still unknown.

In chronic nephritis with edema complicated with cardiac insufficiency after the older and better known remedies have been tried without effect, novasural may be administered. It increases the elimination of sodium chloride and water. As novasural contains a high percentage of mercury, the patient should be kept under close observation during its administration.

Of our older drugs ammonium chloride and calomel deserve a place among the drugs useful in the treatment of renal insufficiency.

At best the treatment of true renal insufficiency is inadequate. We can prolong life in some cases, but it is a life of invalidism, idleness and unhappiness in all but exceptional cases. These patients come to us too late.

Let us hope that the annual health examination movement will be generally adopted. Then these cases will come to medical men early enough for



effective prophylaxis and treatment.

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#### DISCUSSION

Dr. D. L. Rider, Bushnell: Is it not true you have to consider animal experiments on rabbits, which are not carnivorous animals, as being a little bit out of the line of protein therapy in experimental work? Taking animals that live entirely on protein diet, I think the results will be different in their outcome and their interpretation.

The question of how much protein a human being can take and how much he should take has been worked out, I think, pretty well. But the human organism takes not only carnivorous foods but herbivorous foods as well. I do not think we can conclude from rabbit experiments, or other lower forms of life definite results to govern our treatment of nephritis as far as the protein part of it goes.

There is some question about how much protein a human being ought to take. Some people take a great amount and apparently have no ill effect, while others do not have the same experience.

Dr. N. C. Iknayan, Charleston (closing): Animal experiments have tended to prove what the clinicians had found. We know that in the animal kingdom, including the human being, there is a close resemblance in physiology. Of course it is impossible to produce in animals exactly what happens in human beings. That is understood. These conclusions are not final.

We know in practice so many different tests are used but none of the tests afford evidence, ample enough by itself, to make a diagnosis on. They usually supply a group of probabilities.

There are many questions we could not answer, it is true. We have not explained everything; we are not expected to, but enough evidence has accumulated to show that we can get along with less protein than the average American dietary contains. If a man takes no other nourishment but protein, about 58 per cent of the protein acts as carbohydrate in the system. If he is taking enough carbohydrates, protein will act as protein only.

I think the criticism is well taken. You cannot produce exactly the same conditions in rabbits, dogs and other lower animals that happen in human beings.

The results of animal experiments are suggestive, but could not be considered conclusive.

#### DENTAL WORK AMONG THE INSANE\*

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This paper deals only with the insane of this hospital, and is a general survey of the ordinary procedures, in treating the dental ills and relative complaints of the patients. I can safely say here, that as far as I have been able to ascertain, through reports from other institutions and verbal conversations with several dentists from other hospitals, the methods and types of dental treatment run a parallel course.

The first bit of work done is the examination of the mouth of every newly admitted patient. That is done after the physical examinations, the spinals and blood tests have been made, and is made while the patients are still in bed, and are easily controlled. The examination consists of the recording of all missing teeth, remaining roots, cavities in the teeth, presence of crowns, bridges or plates and the general care of the mouth as to cleanliness. This is all recorded on a special chart, and is filed with the other data in the case history. Actual work is not done on the newly admitted patients at this time, except for the purpose of relieving pain, which in every case is of prime importance.

Work on all patients consists of first, the relief of pain. Patients will come in complaining of various types of pain, some real and some imaginary. Some come in with swollen jaws, but not complaining of pain. Some of the patients we would never know suffered pain if the tooth did not become abscessed and the jaw become swollen, because to some pain is an unknown feeling, or one they entirely disregard. The most frequent cause of pain is the presence of broken down teeth and roots which have become abscessed, and, in practically every case calls for extraction.

Patients are brought for dental work in the following order:

First, those who complain of pain and ask to be taken for treatment.

Second, those with swollen jaws who do not complain, but are sent by the doctor in charge.

\*Read before the Northwest Branch of the Chicago Medical Society at Chicago State Hospital.



Third, those desiring work needed, but not in pain; such as cavities filled, a root extracted, teeth cleaned, etc.

Fourth, those brought in for some form of restorative work, such as plates or bridges, usually by a relative.

Every patient, except a patient who has a ground parole, is accompanied by an attendant, when brought to the dentist.

An important part of my work consists in treating patients who are incapacitated. This may take the form of a visit to the hospital ward where a patient in bed may need an abscess incised, or a root extracted. The hospital physician notifies me of any necessary dental work he finds while making his rounds. At other times I may be called to the infirm ward where a bedridden or infirm patient may be suffering pain due to his teeth. Another place visited is the "hydro" ward, where a disturbed patient may need attention, but where it is inadvisable to send him to the dental office because of his disturbed condition. He may cause increased disturbance, or attempt escape.

Occasionally a patient in good physical condition, able to walk to the dental office, will develop a stubborn streak and refuse to go to the dentist. For such a patient the work must of necessity be done on the particular ward, if it is urgent, such as the relief of pain. Any work on such patient, not of an urgent need, is done only when the patient has quieted sufficiently to permit of some co-operation. For any other patients able to walk, all dental work is done in the office of the dentist, fitted for that particular purpose.

Extraction occupies the foremost position among the types of work done for the patients here. The most frequent cause for extraction is the relief of pain. The teeth extracted are mainly roots, and badly broken down teeth, which may or may not be abscessed. Then there are those teeth which become abscessed under a filling or crown but are otherwise all right. A large percentage of teeth extracted here are lost through pyorrhea. Such teeth are always extracted as an aid in ridding the mouth of any infection. Many of these pyorrhetic teeth are loose enough to be removed with the fingers. Occasionally a tooth may be removed for the purpose of facili-

tating the making of a plate or bridge; and occasionally to suit the crazy whim of a praecox.

Extraction is done here, contrary to the popular notion that teeth are jerked out unmercifully, under local anesthesia, which may be either infiltration or nerve blocking, but chiefly infiltration. General anesthesia is never administered. Abscessed jaws are incised without any anesthetic.

In cases where teeth are abscessed, and no fluctuation is present, I almost always extract the offending teeth, without waiting for the swelling to subside. In my experience here with such procedure, I have never yet had any after effects, such as septic infection, but absolute relief. This is also done without anesthesia. Loose teeth are also removed without anesthesia, for the reasons that the pain of the injection would be greater than the pain of the extraction; and the chance of causing a disturbed patient would be increased. Patients often request that no anesthetic be used, for the above reason. As far as the effects of the anesthetic are concerned, there are practically no effects, other than a slight pain for a day or two, which is the usual after extraction pain. Post-operative pain consists chiefly in the usual after extraction pain. Occasionally a dry socket may develop, but soon recovers after treatment. An occasional osteitis may develop, and persist for a week, but in all cases have found complete recovery from all these ills, after proper treatment.

One outstanding condition I have noted here, is the remarkable healing powers possessed by these patients, in spite of their lack of care. They will stick their fingers in the wound, and put anything and everything in their mouth, and will recover without any ill effects. In fact, I have not had a single case of post-operative infection. A considerable number of patients develop imaginary pains after their extraction and return with all sorts of symptoms.

After treatment in practically every case, consists in washing the mouth and wound with warm salt water or boric acid solution, at regular intervals for several days. The attendant who accompanies the patient is instructed with the directions, and sees that they are carried out on the ward, if possible. In cases of abscessed jaws, a cathartic is always prescribed to promote free elimination and aid in recovery. Cold packs are used where extreme pain is present.

Occasionally patients will be returned after a severe case to have the wound irrigated by the dentist, or packed for a few days, until the acute symptoms subside.

Every patient that comes to, or can be persuaded to visit the dentist, and who has some good teeth left, receives a thorough scaling and polishing of the teeth. Some patients will never permit us to clean their teeth. Many come in at regular intervals of about six months. Many come in at regular intervals for tooth paste samples, and tooth brushes, although tooth brushes are distributed on the wards. In fact, every effort is made to teach and maintain cleanliness of the mouth as well as the rest of the body. On several of the wards tooth brush classes are conducted by the O. T. teachers, with a fair degree of success.

As far as filling the teeth is concerned, the predominating filling material used, is cement. Cements are put in all the front teeth and in small cavities in the back teeth. In large cavities and in the molars, amalgam fillings are put in. In passing I would like to state here that many of the patients co-operate better than sane people, and some really fine work can be done for them.

Restorative work consists only of occasional crowns, simple bridges and plates. Even this much is only done occasionally. It is done only at the request of the patient's relative, who can pay for the cost of the material. The state is as yet unable to furnish all the patients who would need plates or bridges. We have a few cases where plates have been replaced several times, only to be repeatedly broken, by patients who become easily disturbed at frequent intervals. If patients who have plates should happen to break the plate, or break out a tooth or two, and cannot pay for the repair, the state has a small fund which takes care of the cost of the repairs. We have made some plates for a few working patients who have no means to pay for the material. Epileptic patients get no removable bridge work or plate work of any sort.

The last phase of constructive work, if such it can be called, is root canal treatment. Of this there isn't much to tell. The outstanding feature is, the minimum amount of that type done. On some of these patients it would be impossible to do it with any kind of surgical cleanli-

ness, let alone sterility. Anterior teeth and an occasional bicuspid are treated. A few patients, such as recovered manics and alcoholics will permit of more complicated treatments. But since root canal work, at its best, is none too good and often results in abscessed teeth, I can see no necessity for taking any chances of promoting infection; hence the small amount of this kind of work.

We have had a few cases of Vincent's angina (trench mouth), most of which have been treated by the hospital physician, and when the acute symptoms have subsided, have been sent to the dentist to have the teeth scaled and polished, and the mouth cleaned thoroughly.

I will take a few minutes to report the reactions to dental work of the various groups of patients. I have found recovered alcoholics to be the best. They are usually well behaved, understand that something is being done for them and are co-operative and appreciative. Manics are next best but hinder the operator by their incessant talking. Paretics are next in order, and respond fairly well, are appreciative, but lack coordination and hence are often difficult to work on. They also possess fanciful ideas of right and wrong ways of having a piece of work done, and will often insist on having it done their way, which is usually wrong. Epileptics have proven the best in a few cases, but as a general group they rank next to the paretics, but are the most appreciative. The worst patients are the praecoxes. A few co-operate, but the majority will try to fight, and only necessary or urgent work can be done for them. In a few cases it has been found necessary to have help to do something for the praecoxes.

SUMMARY: Contrary to a still existing notion that no sooner a patient gets into an asylum than he is forgotten or further abused, every effort is made to improve the patient and send him back to society, if possible. In this, the dental work plays as important a part as any. Not that any spectacular recoveries have been made, because of some dental work, but simply the ridding of the mouth of infection, and the attempt to teach personal hygiene. I have not seen any case here that has had one or a dozen teeth extracted, and immediately recovered his sanity, but I am sure that the removal of any existing infection has been beneficial.



# MALARIA TREATMENT OF "INSTITUTION" PARESIS\*

## REPORT OF 59 CASES

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Treatment of paresis with malarial infection is the logical outcome of numberless observations to the effect that improvement of the patient's condition often follows upon intercurrent infection. Following upon the publication by Wagner von Jauregg of his results obtained in patients inoculated in 1917 this mode of attack was undertaken in various European clinics and was widely adopted in this country in 1924 and 1925.

The *modus operandi* is unknown despite many speculations. Favorable results have been reported in cases with few paroxysms and in those with low temperatures, so these factors are, quantitatively at least, not important in all cases. Leucocytosis of itself is evidently not an essential accompaniment, though it seemed to be in the older methods of fever reaction "cures." An increased formation of specific antibodies has at least not been proven. Possibly there is a change in vascular tonus with hyperemia, transudation and a consequent removal of waste products.

Many reports of small treatment groups appear in the literature of 1925, the summarization of which has not been attempted. Bunker and Kirby's report<sup>1</sup> from the N. Y. State Psychopathic Institute relates marked improvement in 18 cases out of 32, practical remissions in state hospital patients amounting to nearly 60%, conceding, however, that emotional instability often persists, together with a certain degree of loss of initiative.

These authors quote Wagner von Jauregg's 1922 report of 25% of remissions in 200 cases, Kirschbaum and Kullenbach's 31% in 196 cases and Gerstman's 38% of "good results" in 294.

Nolan Lewis<sup>2</sup> reports from the Government Hospital 31% of complete remissions in 51 cases one year after close of treatment.

G. Hermann<sup>3</sup> writes of 20% "healed" in 55 cases.

G. B. Lake<sup>4</sup> collected 941 cases from the literature (incomplete) with 30.9% complete remissions.

It would seem that the results of malarial treatment of paresis have thus far been reported with an optimism about paralleling those credited to tryparsamide, with the advantage that with this method the patient does the work in place of the physician with his numberless intravenous injections.

Within the bounds of the paresis diagnosis there seem few contraindications to malarial treatment, aside from those suggested by common sense. Inoculation with the tertian type may be under the skin, intramuscularly or intravenously, preferably the latter because infection is surer and paroxysms develop more promptly—five to ten days as against ten days to three weeks by the other routes. The present reporters' series gave about 25% of failures by the intramuscular route. Two c. c. of blood by vein and 5-7 c. c. into the gluteal muscles is the usual dose.

The paroxysms often develop irregularly and then straighten out into typical tertian seizures, or occur daily. The daily attack saves time but is hard on a patient who is not robust. The temperature in our series has run high when the attacks have developed typically. Recovery is prompt with small doses of quinine, five to ten grains t. i. d. The virulence of the organism is not diminished by repeated passage through the human without intervention of the anopheles. Patients at times become confused during the fever, but upon the whole they accept their sickness quietly. Occasionally acute mental disturbance develops.

The complications in reasonably well selected cases are few. In this series four patients died, one of exhaustion after several chills because he was lost sight of and continued to work as a painter until so far gone that he could not recuperate. The three other deaths occurred in men whose physical condition was poor before inoculation and in whom a low grade more or less continuous fever merely precipitated the exitus lethalis.

Plehn<sup>5</sup> reports three deaths due, he thinks, to a flooding with parasites, and suggests counting a number of fields each day, stopping the fever when 10% of the blood cells are found to be infected. One case of nephritis developed in our series and hematuria resulted in a private case inoculated with the same strain. Rupture of the spleen has been reported. Jaundice with

\*Read before Illinois State Medical Society, Section on Medicine, Champaign, May 19, 1926.



great reduction of reds and loss of weight is common but promptly recovered from.

Mental improvement at times begins during the infection and one of our patients even went into a remission with the sixth paroxysm, but in the majority betterment goes along with convalescence and proceeds for many months. Many cases in this series are really too recent to pass upon as to ultimate results, and for this reason this can be considered only as a preliminary report.

Serological changes occur, but as is the case with tryparsamide, do not parallel the mental condition and seem to have no significance so far as it is concerned. *No one of our series has developed thus far more than a reduced Wassermann in the spinal fluid.* The blood may become negative. Cells and globulin as in all forms of treatment are reduced. The Lange is seldom affected in our observation.

The remissions in the group reported number 11—18.6%. The average age in this sub-group was 35 years upon admission and all were admitted in 1925. All save two had from 12 to 24 chills and temperature ranged from 104 to 107 save in two. No serological changes of note occurred. The mental state was passed upon and agreed to by the three of us (save in the Jacksonville group of 18 in which one alone (N) was the sole judge as to 3 remissions) and every attempt was made to arrive at an impartial decision. For this reason two cases are reported with a question, to balance which several were placed in markedly improved class, who we felt might have been classified, by others as remitted. Previous treatment so far as known was slight if any. It is interesting to note that in this group of remissions the mental condition before treatment was "poor" to "fair" in all patients save one. All of them now have good insight, realize how sick they have been, and comment upon their return to health. Six of these eleven had been cases of the simple, dementing type, while five were rather acutely excited or confused, or both.

There were eight men who made marked improvement—11.8%. The average age was 37.6 years upon admission; otherwise there was no marked difference between this group and that of the remissions. One developed acute hallucinosis during treatment, which later disappeared. Another might be considered as a re-

mission were it not for a rather well marked emotional instability.

The stationary cases numbered 21—35.6%. The average age in this group upon admission was 40 years and many had been in the hospital several years. Nine had less than 10 malarial paroxysms and five were cases in which the parietic process had apparently been arrested by tryparsamide therapy. These latter were not proper subjects for malaria therapy since they had already suffered apparently irreparable brain damage.

Three cases failed mentally coincidental with treatment, or as the result of it.

As stated above four died.

Last year one of us (C. F. R.) reported results obtained in 42 cases of paresis treated during 1923 and 1924 at the Elgin state hospital with tryparsamide, and it is interesting to note that the percentage of remissions obtained was practically the same as in the present study—19%. The improvements likewise about parallel each other in the two groups. It remains for the investigator of a few years hence to make statistical comparison of the permanent results, if there are such, secured with these two promising methods of therapy.

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#### DISCUSSION

Dr. George Hall, Chicago: Any therapeutic agent which is so valuable as is the malaria treatment may also be an agent for harm. So we must not think that the malaria treatment is simply a method of giving the patient malaria and then letting him alone. It is at times dangerous.

One of the things we have to look out for in these cases is the fact that so frequently we aim to give the ordinary tertian type of the disease, but the patient more frequently develops the double tertian. In that way he becomes very rapidly depleted and weakened so that very frequently the malaria must be interrupted rather early. That happens, and I have seen it happen in a few cases where marked jaundice has taken place. The destruction of the blood cells is so marked that it affects the patient's nourishment very materially. Only last week I listened to four or five papers upon this subject where they reported some two or three hundred cases that had been treated after this fashion, and the death rate averaged some eight or ten per cent. In some of those cases hemoglobinuria took place with bad results.

I have had one or two cases where we have given the

malaria treatment and marked herpes and erysipelas have developed. Fortunately, those patients did not die, but they certainly underwent a severe taxation.

After all, the secondary infection may have been of value in those cases. We must understand, therefore, that it is not a harmless method, by any means.

There is another thing that may be of concern in connection with the malaria treatment. Some of us are still in the inquiring stage as to what takes place. Why is malaria such a valuable agent?

I had the pleasure of speaking with Professor Plaut, himself, who was the successor of Wassermann on this very subject. While he uses the relapsing fever organism more frequently than the malaria organism, he would not commit himself as to what reaction does occur in the system. He was inclined to regard it an immunizing influence and that antibodies were produced. Other authorities think that it is really the heat that is producing the effect. That is, by giving them such high temperature, 106 or 107, perhaps the effect upon the tissues exerts influence on the spirochaeta. Experiments have been carried out on animals which were inoculated on the scrotum and heat applied in high temperatures for a certain length of time, an hour or so at a time for two or three different days, and the organisms have, in that way, been destroyed. Following the chills, ten to fifteen paroxysms, patients are given some of the arsenic preparations.

Dr. Charles F. Read, Chicago (closing): As to the use of the malaria plasmodium, practically all the cases I have reported have been treated with the same strain and it seems to lose none of its strength in transmission from one subject to another.

The contra-indications, so far as I can see, are rather obvious in the condition of the patient. If he is cachectic, better leave him alone unless it is a desperate situation which the family fully understands.

About a year ago I reported a similar number of cases treated with tryparsamide which had about the same percentage of results. Unfortunately, we had some cases of diminution of eyesight, and I would not want to treat a case with tryparsamide without the constant co-operation of a very competent oculist in watching the eye grounds.

The *modus operandi* has been touched upon. With the malarial treatment we apparently activate the body's resources for combating infection. Just why the malarial infection operates as it does, I do not know. There is no leucocytosis in malaria. Cases have been reported with favorable results, where the paroxysms have been few and others where the temperature has been low. So we cannot say that the febrile temperature has been entirely responsible.

Dr. Peter Bassoe, Chicago (closing): In regard to the action of tryparsamide on the eyes, I think we are going through the same experience as we did with neosalvarsan. We were at first told that could not be used when there was involvement of the optic nerves, but soon we began to use it for the treatment of such involvement.

Lillie, of the Mayo Clinic, has shown that the optic nerve affections following tryparsamide are similar to

those produced by syphilis and not of the nature of toxic amblyopia with central scotoma. We know that a certain number of these patients have optic nerve disease anyhow, and we are inclined to overestimate that danger somewhat. However, we should be extremely careful and have ophthalmological control, as Dr. Reed says.

To me the most interesting thing about the whole problem is why malaria treatment brings about prolonged remission, and perhaps even cures.

It is not the fever. People have tried everything else that causes high fevers, typhoid vaccine and tuberculin, and so forth. The histological examination of the brains of patients who die very soon after malaria treatment shows increase in the intensity of the inflammation, and at the same time some changes in the character of the inflammation with formation of miliary gummata in the brain substance.

One very interesting observation is that of a paretic who had furunculosis and then had malaria inoculation. After that he developed gummata in the skin, and it is most unusual to have tertiary syphilis of the skin in a paretic.

Putting all this together it has led to the conception that perhaps the malaria treatment brings about a modification of the disease process so that the more severe paretic reaction changes into a more simple syphilitic inflammation which is amenable to antisyphilitic treatment. As was just pointed out by Grinker, malaria treatment thus paves the way for more efficient antisyphilitic treatment.

It has been advocated that we should perhaps first give the patient barber's itch, or something which causes a great deal of skin irritation, and then malaria, and then follow that up with anti-syphilitic remedies. The idea is that a skin infection stimulates the formation of antibodies in the skin and that the spirochete pallida which in the paretic is "neurotrope" once more becomes "dermotrope" and can be reached by our remedies.

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## EXOPHTHALMIC GOITER\*

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CHICAGO

Last December I had the pleasure of reading a paper before the Radiological Society of North America on the "Roentgen Therapy of Goiters." The various methods of treatment were discussed and the results of the treatment given.

At this meeting Dr. Crile gave a very interesting and scientific presentation of the surgical treatment of goiters. I am going to repeat here what I said in Cleveland, I do not believe the x-rays will cure all types of goiters or even all exophthalmic goiters.

In giving my opinion as to the value of roent-

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gen rays based on considerable experience as a therapeutic agent, I am going to keep rigidly to my field. I do not intend to tell the surgeon that we have the only method by which a goiter can be cured and that surgery should be relegated to the field of has-beens. I am sure I am not competent to discuss the various techniques of thyroidectomies. While I freely admit my limitation in the field of surgery, I am also just as certain that the surgeon knows no more about the field of roentgen therapy than I know about surgical technique in thyroid diseases.

The roentgenologist who gets up before an audience of physicians and states in an unqualified manner that he can cure all goiters by means of x-rays is either not telling the facts or else he has only had a few cases and they were fortunately, or perhaps unfortunately, the responsive hyperplastic types. After treating over five hundred goiters I am well aware they cannot all be cured.

Taking the other side of the question, namely, surgery, I have heard many surgeons get up at medical meetings and belittle the x-rays and the x-ray man, as he calls him. Many of them, and this includes some of our better surgeons, will say very knowingly, that the x-rays are of absolutely no value in the treatment of any type of goiter. On close inquiry, you will later be informed that he has tried one or two cases and then did not allow the therapy a thorough trial, or else dictated how, when and where the treatment should be given. How many patients could the surgeon cure if the medical man or roentgenologist told him with their meager knowledge of surgery, how to operate and all about the finer details that are learned only through a large experience.

That there are many failures in surgery is a known and accepted fact even by the most enthusiastic surgeons. That there are many failures following x-ray therapy is also admitted. In many instances the surgeon sees our failures and we see his, and as a last resort, the internist finally gets all our failures. It is my opinion that the internist is the best qualified to judge as to the merits of the two methods of treatment. It is the medical man who bears the brunt of the grief. Patients who have been operated on usually drift back to the internist following surgery. If there is a recurrence of symptoms after the operation, he must find some other method of

treatment, or if too much of the gland has been removed, he must worry along with the patient, trying to replace the absence of thyroid tissue by some gland extract.

All patients treated in our department are referred by either an internist or in some instances a surgeon. We do not depend upon our own judgment as to whether or not they are suffering from thyroid disease. Each case is checked by several basal metabolic determinations, one not later than the day before treatment. The metabolic rate we feel is the most important finding in the successful treatment of goiters by means of the x-ray. Upon it depends the amount of therapy given. We will not treat a goiter patient without first knowing the metabolic rate. I want to impress upon you the extreme importance of an accurate metabolic determination in the roentgen therapy of goiters.

In our department we decide our dose by the rate. If the rate is extremely high, the patient must be treated very carefully, with small doses. If large doses are given, the metabolic rate may greatly increase and the results be very serious. We all know that following x-ray therapy, there is a marked rise in the metabolism which may last for a week and then gradually subside. Before a second series is given another metabolism is taken.

The mortality in surgery throughout the country is well over ten per cent. It is true that in some of our clinics the mortality is as low as one per cent. While we are willing to admit that the mortality is very low, there is, however, still a fair chance of the patient dying during or following the operation. Even though the mortality is only five cases in one hundred, for those five it represents one hundred per cent. In looking over the literature I am unable to find one death directly attributable to the x-rays.

If the ultimate results of surgical treatment of goiters were uniformly good, and were lasting, the additional risk might be justified. But only too often we see patients who have had one or more than one operation, and have received little or no benefit.

The end results of x-ray treatment are also, we feel, not always what we would wish, but in all except a very few cases, additional treatment will secure the results wished, without any chance of mortality.

The only admitted drawback to x-ray treat-



ment is the length of time required and for economic reasons this may be a factor in determining the manner of procedure. I do not believe, however, that the total loss of time is much more with x-ray than with surgery.

That I am not alone in this view is substantiated by the increasing percentage of cases referred each year for roentgen therapy, not only by the internist, but by the surgeon. The fact that these men are referring cases for treatment is *prima facie* evidence that the method has some merit.

It is not the intention of the essayist to precipitate an argument with the surgeon or the internist. We do not intend to claim in the progress of this paper that the x-rays will cure all types of goiters or even all exophthalmic goiters. I am sure from past experiences we are cognizant of the limitations of radiation. To claim in an unqualified manner that the x-rays are a panacea in all types of goiters is to bring the profession into disrepute. That there are many cases which respond to surgery is a known and accepted fact; that some patients respond and get well under rest is also a known fact; that there are cases that can be cured by x-rays is also true. In this symposium talking of cures we must all admit that there are cases that fail to respond to surgery, rest or x-rays. In these refractory cases the close cooperation of the surgeon, internist and roentgenologist is imperative.

In our thyroid work at St. Luke's Hospital, we have enjoyed the close cooperation of an internist, Dr. N. C. Gilbert, a surgeon, Dr. H. E. Mock, and a pathologist, Dr. Arthur Rissinger. Each patient is gone over very carefully before deciding what is the best method of treatment.

In this discussion of roentgen therapy we will consider chiefly the exophthalmic type of goiter, but we believe, however, that good results can be obtained with any type of hyperfunctioning thyroid although not with equal certainty. It is a well established fact that in the treatment of the exophthalmic type of goiter, the x-rays are of great value and in the majority of cases a cure can be obtained.

In the treatment by means of roentgen rays it is important that the patients be properly selected. There are doubtless cases that should be referred to surgery at once, among these would be cases where mechanical pressure of the enlarged gland upon the trachea or other structures causes symp-

toms. There are a few other cases where surgery at present appears to be more efficient in the light of our present knowledge. What the determining factor is I am not prepared to say. I am however equally certain that many of the cases now operated upon would do better under roentgen therapy.

Every patient with a high metabolic rate without pressure symptoms should be treated with x-rays. From past experiences we feel that all cases should be hospitalized, the results will be better, and certainly more prompt. Patients should be kept in the hospital during treatment and the succeeding week, when possible, as the metabolic rate may take a sharp rise following treatment, even doubling in some instances. During the period between the seventh and fifteenth day, the metabolism recedes to the initial rate and then usually starts to fall lower.

It is not advisable to place these patients in a general ward where patients seriously ill and convalescent are either complaining or telling of their past and present ailments. It is preferable that goiter patients be placed in a private or at least a semi-private ward. If it is not possible to keep them in a private or semi-private room in a hospital they should be kept at home in bed and brought to the roentgen department every other day for treatment. Occasionally good results can be obtained with the patient up and about, but not with equal certainty. All people attending the patient should be warned not to argue or displease her as each time she becomes irritated and excited a definite set back is the result. Worry should be discouraged. Keeping the patient in good spirits helps a great deal in the treatment. Everything possible should be done to add to the patient's general comfort. When the patient is brought to the x-ray department for treatment she should be told in a very assuring manner that the procedure is devoid of any danger and is entirely harmless, if she will lie quietly. It is always advisable to have the transformer and motor in another room. In this way the noises are obviated and the patient is more reposeful.

After the treatment the patient is returned to her room and kept in bed. Always inform the patient that her neck will become swollen for a time following the treatment. The enlargement is only transient and in twelve hours will have

subsided. Mild sedatives may be advisable during and just succeeding the treatments.

In the treatment of exophthalmic goiters it is not necessary to obtain a tanning of the skin. It is well to remember that the skin of the exophthalmic is more sensitive than that of the normal individual. The usual rule is not to give more than thirty per cent of the erythema skin dose, during one series. I do not believe there is any advantage in larger doses and I can think of many disadvantages such as telangiectasis and permanent pigmenting of the skin following heavy doses. If tanning of the skin occurs, in later years the skin becomes red and irritated when exposed to the wind. The subject of burns following x-ray therapy of the thyroid has been a much advertised argument used by some people opposed to this form of treatment. In our experience of ten years which comprised a series of over five hundred cases, we have never had a burn or even a marked erythema. If the dosage is properly estimated by carefully measuring the voltage and milliamperage and if the filters are closely checked, I am sure no burns will result. A word here in regard to the measuring of the voltage. Do not allow any manufacturer or any of his agents to sell you a machine with the understanding that after it is once calibrated the voltage will always be the same for the calibrated settings. If this information is taken for granted and patients treated henceforth serious results will follow. Every machine used in therapy should be tested each time a treatment is given, with sphere gaps. The voltage delivered to the tube differs with the line voltage and as the contacts on the rectifier becomes dirty there is also a marked change. The safest and best policy is to test your own machine and depend upon your own observations.

The matter of time that elapses between treatment and improvement is problematical, differing with each case. In some instances improvement will be apparent ten days after the first series while others will show no improvement until two or possibly three series have been completed. It has been our experience to note some improvement three weeks after the first series in the majority of patients. During the past three years we have seen patients continue to show a metabolism of plus forty for three series and then suddenly fall to normal accompanied by a gain in weight and a slowing of the pulse rate. The

toxicity of the patient does not seem to be the main factor in determining the rate of improvement; some of the most severe cases improve more readily than the less toxic types.

Recently we have seen a patient with a metabolic rate of plus 112 fall to plus 30 following one series accompanied by a gain of ten pounds. This patient had a subtotal resection. The rate dropped following the operation from 115 to 112 even after two months post operative rest. Quite frequently patients with a metabolic rate of plus 30 respond very slowly, the pulse rate remains rapid and there is a gradual loss in weight. In this type of patient it is well to change the x-ray technique. Some time ago we had a patient who responded very poorly to three series of treatments and the doctor who referred the case was becoming discouraged and threatened operation. We pleaded for one more chance. For the fourth and deciding series we changed our filters from six to four mm. of aluminum and following this treatment there was a marked improvement. The patient is symptom free and has a normal metabolic rate after eight months.

In our series of cases we have treated one hundred post operative goiters operated on in all parts of the U. S. A. The patients have ranged from mild types to the very severe. In many of the patients the metabolic rate has been higher following operation than before. The results in these cases have been uniformly good. We do not, however, advise operation prior to radiation on the theory that it will minimize the dangers of radiation, unlike the surgeon who often advises radiation and later operation, lessening the dangers of the operation. In so advising, the surgeon openly admits that radiation has some merit and if he will but allow the therapy a fair chance in practically all if not all cases, operation will not be necessary. The plan of treatment in post operative cases is practically the same as in cases that have not been operated on. Fortunately operation does not add to the difficulty of radiation as the surgeon claims radiation adds to the difficulty of thyroid removal. The careful estimation of the dose governed by the metabolic rate is the important factor.

For a number of months we used Lugol's solution before x-ray therapy. In all the patients there was a marked decrease in the nervous symptoms and the metabolic rate. Considering the drop in the metabolic rate and the general im-



provement we thought it might be well to give all patients Lugol's solution during radiation. This plan was followed for a time but to our disappointment we found that our x-ray dosage was too small and in the course of a month the metabolism was back at the original rate. The patient would start with a metabolism of plus 50 and after a week of iodine would drop to plus 25 or lower. Roentgen therapy would then be started and a series of small dosage given. One month after the treatment the rate would again be plus 50. From this experience we decided that during radiation no iodine medication should be given as it masks the symptoms and makes it impossible to carefully estimate the x-ray dose. This is really our only objection to the using of iodine during radiation of the thyroid. Since last July we have discontinued all iodides while giving x-ray Therapy. The patients who had been on Lugol's solution were later radiated after discontinuing the drug and the usual improvement followed. The importance of an accurate metabolic rate is here manifest in the estimation of the dose necessary to bring about the desired results.

The question is often asked, "How many cases of myxedema do you encounter following x-ray therapy?" In ten years' experience with roentgen therapy of goiters, we have yet to see in our series a case of myxedema follow radiation. We have had two patients gain considerable weight and show a minus metabolic rate following therapy. The symptoms persisted for a period of two months then the rapid gain in weight stopped and the metabolism returned to normal.

Regarding injury to the parathyroids. It seems quite possible that the parathyroids might be injured by radiation. I have made inquiry of several staff members for whom we have treated many thyroids regarding this matter. From no member of the staff have I been able to find a positive case. On interviewing Dr. Robert Preble, I asked him the question regarding functional disturbance of the parathyroids. He thought it was possible that the parathyroids might be injured but that he had never observed changes during or following radiation that he could attribute to that source.

The subject of operation following radiation is a much discussed question and has been argued pro and con. There have been arguments put forward by many surgeons that radiation in-

creased the bleeding due to changes in the blood vessel walls and also caused an excessive amount of connective tissue which added to the difficulty in the removal of the gland. Not being a surgeon I am not prepared to argue the question. I can, however, quote what I have learned from various surgeons on our staff. Most of the surgeons claim they experience very little difficulty following radiation unless a great deal has been given over a long period of time followed by telangiectasis. It is in these cases of long treatments that they encounter profuse hemorrhage and an abundance of connective tissue. One of our leading surgeons opposed to radiation always complained when he had a difficult thyroid. The x-ray was to blame in all instances. During this time we were treating a toxic goiter. Because of her failure to obtain complete relief from x-ray therapy it was thought advisable to resort to surgery. The young lady had had a large number of treatments, seven series in all. In the transfer from the medical to the surgical service she was assigned to the above mentioned surgeon for operation. In the course of the transfer he was not advised of the previous radiation. Following the operation he was asked as to the difficulties encountered in the removal of the gland. To our surprise he said he had experienced no difficulty either in the amount of connective tissue or hemorrhage. The settlement of this question is primarily surgical and it rests with the surgeon to decide. The question does not appear of great importance as the number of patients that go to operation following proper radiation is negligible. The radiation of post operative thyroids is certainly more important and frequent.

For the past five years metabolic determinations have been made on all cases of goiters referred for radiation. I am sure our work has been a great deal more satisfactory since we have followed this plan. I do not believe an exophthalmic goiter is ever encountered with a metabolic rate constantly normal or below normal. There are periods when the rate may be approximately normal but these are temporary and are accompanied by a remission in the symptoms. It is only by frequent metabolic determinations that an accurate x-ray dosage can be established. For example, two patients suffering from exophthalmic goiters are referred to the roentgen depart-



ment for therapy. One has a metabolic rate of plus 90, and the other plus 40.

It is evident that these patients cannot be given the same amount of radiation. If the patient with the plus 90 is given a large dose of x-ray, the rate following the series will increase in some instances 40 per cent. It is quite obvious what the reaction would be. We have seen patients with a relatively low rate of plus 20 increase to plus 60 immediately following the series. Since these experiences we have leaned toward the smaller doses and accepted the metabolic rate as the deciding factor. In recent years it has been our practice not to treat a patient with a metabolic rate of plus 15 or below unless there are special reasons. If there is some doubt as to the accuracy of the test we have the patient return for another examination. It is possible that the rate may be increased at the later examination, the first test having been made during a remission. It is our opinion that the basal metabolism is the deciding factor in the diagnosis of exophthalmic goiter. Most of the patients for metabolic determinations are located in the hospital; we believe, however, an accurate test can be made on outside patients. Outside patients should come to the department and rest on a cot for an hour before attempting the test. The determination should not be made until the patient is thoroughly familiar with the apparatus. It is absolutely imperative that the patient be quiet and composed if an accurate test is to be obtained. If during the test the patient becomes nervous and struggles with the apparatus, the results will be inaccurate and must be repeated. In the differentiation of border line cases the test is of paramount importance. Not long ago we saw a case suffering from many indefinite symptoms. The diagnosis was in a quandary. Due to her rapid pulse a metabolism was done and the rate was found to be plus 45. Since that time she has had one series of x-rays and is greatly improved.

For months following radiation we require the patient to return for frequent metabolic tests even after all symptoms have disappeared.

It is an admitted fact by all branches of medicine that the metabolic rate is the main finding in the diagnosis of exophthalmic goiter. In all clinics much study is given to the metabolic determination. The surgeons will admit that it is of great importance and will spend much time

on pre-operative determinations; but while they are really interested in the metabolism before operation, they spend very little time on the post operative rate. If the rate is of such paramount importance before operation, why is it not just as diagnostic after operation? We feel that it is the only way of accurately estimating the efficiency of the operation. In fact it serves as a lobometer.

The question is often asked: "How long following radiation will the patient remain well?" At the present time we have several cases well after ten years. During the ten years they have received no further treatment and have been able to carry on their daily duties. We have some three hundred cases well after four years. These patients have been carefully checked by metabolic determinations and are seen from time to time by an attending man. There is a certain class of patients who require occasional retreatment of one series. In part of this group we believe it is due to insufficient treatment in the first series. For the remainder we are at present unable to assign any reason. Before the patients are completely cured they return to hard confining work which quickly leads to an exacerbation of all symptoms. It is well to tell these people they will get well much more quickly and will be money ahead if they will follow instructions attending to their most important job, conservation of health. If they will not agree to do as they are advised, it is useless to expect a cure from radiation. Surgery might just as well be resorted to in this type of case in the beginning.

In our series of cases we have had one death. The patient was a young lady with a relatively high metabolic rate. The first series of x-rays caused no untoward symptoms. The second series was given after a lapse of one month. Three treatments were given at intervals of three days. After the series the patient's skin became bronze, not unlike an Addison's disease. Accompanying the bronzing of the skin was a profound cachexia with a marked fall in blood pressure. In a short time she became delirious and died in a few days. It may be possible in this case the x-rays played a part in her death.

A similar case was observed in one of the western states after complete extirpation of the thyroid. In this case thyroid extract was given and the patient recovered.

It is advisable to discontinue roentgen treat-

ment temporarily when the metabolic rate falls to about 20% as the metabolism may continue to fall some time after the last treatment. If the metabolism does not continue to fall or begins to increase treatment must be resumed at once, carefully checked by frequent metabolic determinations. I think that some of the cases of hypo function reported are due to not following this rule. What is more important in some of the cases of inadequate results occur because the metabolism is again not followed. If the metabolic rate does not continue to fall after the last treatment or tends to rise, a couple of additional treatments under those conditions will insure permanent good results.

I believe our good fortune in not having a case of myxedema is due to the fact we have discontinued temporarily radiation when the metabolism has dropped to plus 20%. The treatment is not resumed if the metabolism continues to fall. Another important symptom during the treatment of goiters that we have paid special attention to is the rapid gain of an excessive amount of weight. If following a series of treatment in a patient with a very high metabolic rate there is a marked drop in the rate accompanied by a gain in weight of 15 to 20 pounds, treatment should be discontinued for a time. If these patients are not closely checked and are treated without a metabolic rate, myxedema may follow.

Occasionally for some reason or other, patients are called out of the city, where they remain for many months. While away, these patients forget all about previous instructions regarding examinations and metabolic determinations. They are occasionally showing symptoms of their old trouble, when they return. In these cases treatment should be instituted. It has been our experience that they will respond as well as during the previous treatment and a cure can be expected if they follow directions.

If a patient is sent to you with a previous history of radiation do not be discouraged and send the patient away. Perhaps the treatment has not been properly administered or possibly the patient did not cooperate and come back for treatment as directed. Before treating the patient, find out where she was radiated and obtain from the radiologist what factors were used in the treatment. If the metabolism is high the patient should be radiated using a technique adaptable to her findings.

*The Heart:* It is obvious that anatomical changes in the heart muscles are permanent and cannot be restored by roentgen therapy or any other type of treatment. A great many of the physiological deviations from the normal can and will be restored. The heart rate, where there is a normal rhythm will return to normal. Where there are only paroxysmal attacks of auricular fibrillation, these will disappear and the heart rhythm remain normal. We have three cases of what was apparently a constant type of auricular fibrillation return to normal and remain normal under successful roentgen therapy.

**CONCLUSION:** If all diseases responded to x-rays as does exophthalmic goiter the practice of roentgen therapy would indeed be a pleasant and satisfactory vocation.

2. It is our opinion that all cases of exophthalmic goiter without pressure symptoms should be treated by means of the x-rays.

3. Most if not all cases of exophthalmic goiter can be permanently cured by x-ray therapy.

4. Previous operation is no contraindication for x-ray therapy.

5. Any hyperfunctioning thyroid should be treated by radiation. The results are not as conclusive as in the exophthalmic type but many can be cured.

6. Treat no goiter until you have had a metabolic determination and constant checking.

7. Patients with a metabolic rate of 20 or less should be kept under observation before treating.

8. The amount of radiation necessary is determined by the metabolic rate.

9. Patients should be examined at intervals following treatment checked by a basal metabolism.

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## MENINGEAL CARCINOMATOSIS WITH A REPORT OF A CASE\*

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Cerebral carcinomatosis secondary to distant malignant foci in the lungs, stomach, mammae, uterus and prostate is not an infrequent occurrence. In most of these cases tumor nodules distributed throughout the brain and its coverings are found at autopsy and could well account

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for the exhibition of such varied clinical phenomena as hemiplegia, monoplegia, Jacksonian epilepsy, aphasia and other focal symptoms. However, some of these cases which clinically manifested hysterical or encephalitic syndromes failed to show post-mortem any cerebral metastasis. The symptoms in such instances had been accounted for as a cerebral response to a carcinomatous toxemia.<sup>7-11</sup> Later, however, when thorough microscopic examinations of the meninges were made in similar cases,<sup>6-9-10-18</sup> distinct cancerous foci were found in the dura and pia-arachnoid even though the brain tissue proper was free from invasion. The dura alone has been found to be affected, appearing thickened and hemorrhagic—the so-called carcinomatous pachymeningitis.<sup>8</sup> Other cases show instead a marked infiltration of the pia-arachnoid, in which this structure has been found to be involved mainly in its convex portion, although sometimes the base<sup>1-3-14</sup> and even the entire brain<sup>14</sup> may be encapsulated by a shell of malignantly infiltrated meninges. These cases have been described as carcinomatous meningitis,<sup>12</sup> an example of which is the following:

The patient, V. C., male, aged 33 years, of Austrian nativity, laborer by occupation, was admitted to the Cook County Hospital on January 17, 1923, complaining of pain in the left shoulder, back, right thigh and leg, together with fever intermingled with sweats and chills, constipation, and diplopia. He had had a similar attack in 1921 which lasted for five weeks and has felt better the past year until the present occurrence.

On Dec. 1, 1923, he had an attack of pain in the left shoulder, back, right thigh and foot. The pain was continuous, did not shift, and was not accompanied by redness or swelling of the affected part. He has had chills, alternating with fevers and sweats, and an obstinate constipation. On Dec. 10 he noticed that he saw two lights in place of one; and this has continued since. The patient thought he had lost 25 lbs. since becoming sick. An entering room diagnosis of acute rheumatic fever was made.

He gave a history of attacks of sore throat every winter since 1917; earache and running ear in 1919; denied Neisserian or luetic infection.

The family history, marital history, as well as habits revealed nothing of importance.

Physical examination disclosed a fairly well nourished white male about 30 years of age, perspiring rather freely and acutely ill. Scalp, ears and nose were negative. External rectus of the right eye was paralyzed, preventing the eye from being rotated outward. The patient could see two distinct pencils when one was shown to him. The left pupil was slightly

larger than the right; both reacted well to light and accommodation. The face was pale, mouth normal; tonsils small, exuding no pus on pressure; the larynx was slightly hyperemic.

Neck was negative.

Chest and back were negative, except for slight tenderness over left axilla and the back. Heart and lungs normal. Abdomen and genitals were negative. Extremities evidenced slight tenderness over the right thigh and ankle.

Nervous: Pupillary and tendon reflexes were present. No Kernig, Babinski, abdominal reflex or ankle clonus were elicited.

Urine: Cloudy, amber colored, alkaline in reaction, specific gravity 1025. No sugar or albumin present.

Blood examination showed a red count of 3,060,000; white count of 20,700; differential count 12% small lymphocytes, 6% large lymphocytes, 1% eosinophile and 81% polymorphs.

Wassermann was negative—both blood and spinal fluid.

Blood Chemistry was normal. Total Nitrogen 2800 mg./100 c.c.; Non-protein nitrogen 31.58/100 c.c.; Urea Nitrogen 11.64/100 c.c.; Urea 27.97/100 c.c.; Uric Acid 2.6/100 c.c.; Creatinine 1.46/100 c.c.

Spinal fluid was under pressure, clear, gave a negative Nonne and Pandy test. It revealed a cell count of three small lymphocytes.

Ophthalmoscopic examination revealed normal eye grounds.

Further course: The patient was examined by Dr. Hassin, who found a slight paresis of the left side of the face, with narrowing of the left palpebral fissure and a deviation of the tongue to the right. He suggested a possible diagnosis of lethargic encephalitis. The patient's condition did not improve; he became slightly irrational; the right ear started to drain pus; pulse rate mounted to 115, and the temperature to 103.4. He had occasional convulsions. The chest showed rales and tubular breathing. The penis and scrotum became edematous, the former ulcerating and finally becoming gangrenous. The bladder became distended. The left optic fundus showed slight engorgement. The possibility of a brain abscess due to an exacerbation of a chronic otitis media was suggested. The patient's condition grew steadily worse; he became more irrational and the convulsions increased in frequency until death occurred February 6.

Necropsy performed by Dr. D. J. Davis showed a carcinomatous infiltration of the left adrenal and the adjacent lymph glands; the ribs, sternum, skull and tracheo-bronchial glands also exhibited malignant invasion. There was a bilateral hypostatic broncho-pneumonia and a suppurative bronchitis. In addition there occurred cloudy swelling of the parenchymatous organs, distention of the bladder, beginning peritonitis, gangrenous balanitis, and a right otitis media. The brain was slightly edematous and its coverings showed a carcinomatous pachy and lepto meningitis, which will be described in detail.



The convexity of the brain was covered by a thickened and somewhat opaque dura, the outer surface of which was slightly granular over the regions just to each side of the superior longitudinal sinus. This portion was markedly adherent to the underlying pia-arachnoid. Over the posterior superior part, covering the frontal lobe was a fibrosed blood clot, evidently of old standing. It measured about 2 cm. in diameter and 25 mm. thick and had a rough granular surface. The rest of the dura, although somewhat opaque, evidenced no further pathology. The internal aspect of the dura was apparently normal, except where it was adherent to the underlying pia-arachnoid for a distance of 1.75 cm. to the left and 1 cm. to the right of the superior frontal gyri of each lobe posteriorly to the hinder part of the angular gyri on each side. In this portion the dura was very granular and its vessels injected and tortuous.

The pia-arachnoid was markedly thickened and opaque over the area described. It showed intensely dilated and engorged blood vessels, and was infiltrated to a thickness varying from 1 to 3 cm. with a lusterless, yellowish white, granular material. The infiltration was not nodular nor did it invade the dura or brain substance. Over the remaining portion of the brain the pia-arachnoid was apparently normal.

The cerebral sulci showed no distention, nor did the convolutions show any noticeable flattening. The remainder of the brain substance and cerebellum showed no pathology either on the surface or on gross section.

*Microscopy:* The dura exhibited little deviation from the normal. All but a few of the lacunae and interspaces were free from any cellular content; and these contained the cancerous foci, consisting of masses of large, darkly staining cells with a markedly granular cytoplasm and a nucleus rich in chromatin, many of which showed a karyorhexis. Several of these foci appeared to be merely a mass of cytoplasm, having a giant cell formation sometimes containing as many as eight nuclei, and being distinctly necrotic, staining darkly but showing little differentiation between the cell body and nucleus. The cellular accumulations were always in the lacunae or interspaces, and rarely if ever touching the surrounding walls. The dural vessels were but slightly congested and showed no malignant cells.

The pia-arachnoid exhibited a marked distention and infiltration of its areolar vessels with a cellular exudate, consisting mainly of round cells, a few plasma cells, and a very small number of leucocytes. A number of macrophages, containing bits of cellular debris were also in evidence. The sub-dural and sub-arachnoid spaces were packed with large masses of cancer cells, a number of which showed mitotic figures and giant cell formation. The tendency towards disintegration was also marked. The vessels, in striking contrast to those of the dura, were greatly distended and engorged. The peri-vascular exudation was very well evidenced. In no instance, however, did the vessels show malignant cells.

The brain proper was not markedly affected. Some

of the nerve cells were slightly swollen and granular, and in places a distinct gliosis was noticeable. There was no hyperemia, and neither the vessels nor the sub-adventitial or peri-vascular lymph spaces showed any carcinoma cells. At no point was there any invasion of the cerebral substance proper.

These rare cases, a review of the literature revealing but thirty in addition to the one reported above, are of unusual interest both from a clinical and pathological standpoint. The condition was always secondary to some distant malignant focus, being primarily located in the stomach in the majority of cited cases and less frequently in the lungs, mammae, gall-bladder, adrenals and prostate in the order named. Definite clinical evidence of the primary growth however, was lacking in most instances and was usually found at autopsy. The brunt of the attack was borne by the pia-arachnoid which was involved in every case, the infiltration being mainly in the convex portion, although a few instances also showed basilar invasion. Grossly the meninges showed little change from the normal, except in a few cases which evidenced either increased thickening and opacity of the membranes or unusual adherence to the underlying structures. This lack of gross change caused early writers on the subject as Oppenheim,<sup>7</sup> Nonne,<sup>8</sup> and Siefert<sup>5</sup> to regard the central manifestations in this condition as those due to a cerebral irritation resulting from a carcinomatous toxemia analogous to the type found in uremia or diabetes. It was only after thorough histologic examination of the meninges that the true nature of the lesion was determined.

Clinically these cases are peculiar in that the manifestations are so protean and the symptoms usually associated with meningitis such as nuchal rigidity, a positive Brudzinski and Kernig and other meningo-irritative phenomena are usually absent. This may be accounted for by the fact that these classic symptoms are consequent to basilar involvement which is rare in this form of meningitis. The most outstanding manifestations were a changed psyche, varying from a psychasthenic type with listlessness and difficulty in thinking to that with marked dementia, simulating a major psychosis, and motor disturbances of the eye, namely anisocoria and varied ophthalmoplegias. Less frequently monoplegia, hemiplegia and facial palsy were also noticed. The spinal fluid findings were incon-

stant, usually showing an increased pressure but no abnormal cell or chemic content, although four cases<sup>12-10-10-6</sup> evidenced a milky spinal fluid containing globulin and large cells recognized as malignant.

The diagnosis is extremely difficult and was made ante-mortem in only four of the cases, where the existence of a primary growth was known and upon exhibition of definite meningeal symptoms, together with recovery of the neo-plastic cells from the spinal fluid.

#### CONCLUSIONS

1. Meningeal carcinomatosis is a rare form of meningeal pathology.

2. It is always secondary to a visceral carcinosis.

3. It is not usually evident grossly, and requires microscopy for its recognition.

4. The pathology, essentially, consists of a microscopic infiltration of the vessels of the pia-arachnoid with malignant cells, and affects the convex portions rather than the base.

5. The most common clinical findings are those of a changed psyche and both an internal and external ophthalmoplegia.

6. The diagnosis is extremely difficult and was made antemortem in four cases in a series of thirty, being definitely established upon the discovery of neo-plastic cells in the spinal fluid.

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## STITCH ABSCESES: PREVENTION AND TREATMENT

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Stitch abscesses or as they are sometimes called, wound infections, occur several days after an operation and usually involve only the subcutaneous tissues above the fascia. Occasionally, however, the subfascial spaces are involved and instead of pointing toward the surface the pus may invade the peritoneal cavity and produce local peritonitis. Stitch abscess is probably the most common complication seen by the surgeon and constitutes one of his most troublesome problems. The patient's stay in the hospital is necessarily prolonged and his chances of developing a ventral hernia are greatly increased. The causative factors are many. The organisms found are usually staphylococcus albus and aureus, colon bacillus and occasionally the streptococcus.

Excessive fat in the abdominal wall seems to predispose to these infections.

Contaminated suture material may play an occasional part but we must look for the real cause to a slip in technique. This may be due to faulty preparation of the operative field, which procedure is usually left to an interne or nurse. The method of preparing the field usually varies with the surgeon, some preferring to scrub with soap and water followed by alcohol and bichloride of mercury solution; others omit the scrubbing and paint the field with tincture of iodine, mercurochrome, mercurochrome acetone and ether mixture, picric acid, etc. The chances of error in the preparation of the field lie in the incomplete painting of the field, and also in removing the iodine with alcohol before it has a chance to penetrate the skin.

Failure to protect the skin edges with pads results in excessive handling of the skin, thus predisposing to infection of the wound.

Failure to discard the original knife after making the initial incision invites infection. Most important of all is the method of putting on gloves. The sterile glove should not be touched by the uncovered hand, although in the great majority of cases the assistant and internes put on their own gloves and usually touch the gloved hand. Now internes in many instances are forced to handle both clean and pus cases, and so contaminate their hands. It is an estab-



lished fact that even thorough and prolonged scrubbing will not remove all the organisms from the hands. It can be readily seen that by allowing the surgeon's assistants and internes to put on their own gloves, we are increasing the possibilities for infection. This danger can be easily avoided by having the nurse put on all gloves.

All hands should be kept out of the wound as much as possible.

Hemostasis must be complete as oozing furnishes an ideal condition for the development of infection.

Excessive catgut irritates the tissues and predisposes wound infections. Do not leave ligature or suture ends too long.

Having noted the sources of the contamination, the next item of importance is to recognize their existence early. A slight temperature persisting for more than two or three days after a clean laparotomy should immediately be investigated. In probably ninety per cent of the cases it is due to infection of the wound incision. By examining the wound daily, where a slight temperature exists, we will often find some point along the incision which is slightly indurated and tender upon pressure. By removing one or two sutures and spreading the skin edges with a sharp nosed artery forceps we will frequently release a few drops of bloody serum and thus avert a wound infection. Dressings of sterile glycerine changed daily exert a hygroscopic action on the tissues and thus aid in aborting a stitch abscess at this time. Do not wait for redness to appear, for if the infection is not recognized within seventy-two hours suppuration results and if not drained will involve the subcutaneous tissues above the fascia for the whole length of the incision. In these advanced cases free drainage must be secured.

Daily irrigation with fifty per cent peroxide of hydrogen or Dakin's solution seems to favor the disappearance of suppuration and promote healing. Several small cigarette drains placed at various points in the incision, down to the fascia, tend to keep the wound open and thus favor drainage. They should be changed daily.

If the infection is deeper, lying beneath the fascia, continuous hot boric acid compresses will tend to localize the suppurative process and favor pointing externally. The wound should be opened deeply with a blunt forceps and satisfactory

drainage secured. However, the best way to treat wound infections is to prevent their occurrence. Their incidence can be greatly lessened by the observance of a few simple common sense rules, which are:

1. Adequate and thorough preparation of the field of operation. We employ scrubbing with soap and water, followed by ether and iodine. The ether dissolves the fat and allows the iodine to penetrate the skin. The iodine is then allowed to dry and the excess is removed with alcohol. We find that if the field is swabbed with alcohol after the operation, thus removing the iodine, burns will be prevented.

2. Protect the skin edges with gauze pads.

3. Discard the knife after original incision.

4. Have the surgical nurse put on all gloves.

5. Keep hands out of wound as much as possible.

6. See that hemostasis is complete.

7. Do not use an excessive amount of catgut.

If the above simple suggestions are carried out the incidence and severity of stitch abscesses will be greatly reduced.

6701 Stony Island Avenue.

## A PRACTICAL APPLIANCE TO BE USED ON LAPAROTOMY SPONGES

A. E. McEVERS, M. D.

ROCK ISLANDS, ILL.

This appliance is an ordinary horse blanket pin. It offers certain advantages over forceps, rings, etc., that are ordinarily used for this purpose.

These safety pins are inexpensive, usually costing about sixty (60) cents a dozen and can be obtained in almost any hardware or department



Fig. 1. Horse blanket pin used as guard for laparotomy sponges.

store. The whole pin, being made of composition metal wire, nickel plated and twisted into the proper shape, does not rust or stain and can be readily cleaned and easily sterilized. Due to

the fact that they are inexpensive they can be applied to the sponges before they are set up and counted.

These pins have been in use at St. Anthony's Hospital for the past two years and have proven satisfactory.

402 Central Trust Building.

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### APPENDICITIS\*

E. W. MUELLER, M. D.

CHICAGO

The classical case of appendicitis begins with colicky pain in the abdomen, nausea and vomiting, rigidity of the right rectus muscle with tenderness over McBurney's point, accompanied with little or no rise in temperature and slight increase in the pulse rate.

The diagnosis of appendicitis is not as easy as many light hearted operators seem to believe. It is frequently far from easy and is sometimes altogether impossible without exploratory operation. In attempting to make a diagnosis besides the ordinary examination of the abdomen a rectal or vaginal examination should be made.

The disease may be confused with a number of different conditions. It is sometimes confused with typhoid fever. Early typhoid fever associated with marked abdominal pain gives a picture very similar to that furnished by appendicitis. In typhoid the temperature is usually distinctly higher. In cases in which typhoid is suspected operation is not justifiable unless there are local pains and localized tenderness in the appendix region, associated with definite muscular resistance or distinct rigidity.

Acute intestinal obstruction is sometimes confused with acute appendicitis. However, the pain remains localized about the umbilicus and does not pass to or become localized in the right iliac fossa. Lesions of the kidney and ureter are sometimes mistaken for appendicitis but in renal colic the pain runs into the groin and testicle of that side and occasionally passes down the front of the thigh or into the rectum. If any tenderness exists it is found in the loin or in the groin rather than in the right iliac fossa. Urinary and x-ray findings will usually clear up the diagnosis.

Gall-bladder difficulties may be confounded with appendicitis. Cholecystitis, especially when the gall-bladder is low, is extremely difficult to differentiate from appendicitis. In ordinary gall-stone colic the condition is generally sudden in onset, characterized by pain in the epigastric region passing toward the shoulder blade and the shoulder, the pain being most acute and becoming more or less localized in the region of the gall-bladder and there is always tenderness over the gall-bladder region. In gall-stone colic the vomiting is usually violent and almost continuous.

The perforation of a gastric or duodenal ulcer may be diagnosed as appendicitis. In the former there is usually a history of previous stomach trouble although this is not always the case. The onset of acute perforation is sudden with greater shock than is characteristic of the onset of appendicitis. The pain is violent, the rigidity intense, and the pain, rigidity and tenderness are in the epigastric region. Among other conditions which may be confused with appendicitis may be mentioned malignant diseases of the cecum, tuberculosis of the cecum, acute tuberculous peritonitis, twisting of the pedicle of an ovarian tumor, tubal diseases, extra-uterine pregnancy.

The acute onset of pneumonia with few or no clinical symptoms may simulate acute appendicitis especially in children. To operate on a child for appendicitis who has pneumonia simulating appendicitis is a tragedy—the death rate is almost 100 per cent.

Appendicitis like carcinoma depends upon early diagnosis for best results. Early diagnosis will be impossible in cases where the attack comes on while the patient is on a vacation trip, far removed from medical aid.

If the diagnosis of appendicitis is assured the appendix should be removed. The McBurney incision is usually unsatisfactory in that it does not permit examination of the gall-bladder or pelvic organs. The Weir modification gives a little more room.

In suppurative appendicitis the operation is not only directed against the cause of the condition but especially against its consequences, infective peritonitis or abscess or both. In this type of case a right rectus incision should be used. On opening the peritoneal cavity the fluid should be mopped out gently with dry or moist

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\*Presented before North Shore Branch, Chicago Medical Society, December, 1925.



gauze pads. The region should be packed off with lappads which have been wrung out of hot saline solution. The appendix is then removed in the usual manner. Where there is any suggestion of purulent fluid a small drain should be inserted.

In cases where the appendix is gangrenous, the cecum bound down and abscess walled off, it is usually unwise to attempt to remove the appendix. In cases seen between the second and tenth day some use the Ochsner treatment—starvation and salt enemas. This is not used as much as formerly.

Postoperative treatment is extremely important and must be individual and not routine.

### DISCUSSION

Dr. I. H. Chilcotte said that in spite of the fact that appendicitis was one of the things constantly confronted, mistakes in diagnosis were still being made.

In his experience the symptoms of appendicitis vary considerably in the different ages of life. In children it is sometimes very difficult to diagnose acute appendicitis. The bladder is frequently involved and pus is present in the urine. If the physical findings are those of appendicitis the surgeon is justified in performing an operation. He had seen many cases with pus in the urine and physical findings of appendicitis in which had operation not been performed the results would have been very bad.

Dr. Mueller very well described the symptoms of acute appendicitis in the middle aged adult. It is sometimes forgotten that there may be other pathology in the patient which is producing the symptoms of appendicitis.

In elderly people one is more apt to find induration in all cases of appendicitis.

In operating for chronic appendicitis it is well to make the incision above the umbilicus so as to permit exploration of the abdomen.

Dr. A. C. Gavy called attention to the very acute streptococcic infectious type of appendicitis in which a great deal of serum or sero-pus is accumulated and disseminated through the abdominal cavity. Dr. Mueller brought out the value of drainage down to the culdesac in all these cases.

Chronic appendicitis as an area of focal infection must be borne in mind. He cited a case illustrating this.

The diagnosis of chronic appendicitis is now comparatively easy by means of the x-ray. There are two types of appendix shown in the x-ray, one is the retentive appendix in which the barium is retained in the lumen for a long period of time, and the other is the appendix with a lumen so small that the barium has never been allowed to enter.

Regarding technic, he has found on several occasions a distinct advantage in using the subperitoneal method of removal. It is easily accomplished.

Dr. A. H. Montgomery said that in the differential diagnosis between typhoid fever and appendicitis, it should be remembered that in the former the fever precedes the pain and there is a leukopenia.

It is important to make a diagnosis early in the case of appendicitis in children. He agreed with Dr. Chilcotte regarding the diagnosis of chronic appendicitis in the absence of a history of at least one acute attack. Many of these cases should be considered in the light of a colitis.

In children the McBurney incision is the one of choice. In adult women a median incision is better.

Dr. Benjamin Breakstone said many times a surgeon was asked to operate on an acute appendicitis in a child only to find that it was a case of scarlet fever. He quoted the statement made by Deaver in 1903 that every pain in the abdomen in children should be considered appendicitis unless it can be proved otherwise. Observation since that time has convinced him that Deaver was right. In children the appendix usually ruptures within the first twenty-four hours. He did not agree with Dr. Mueller that the mortality in appendicitis complicated with pneumonia was 100 per cent. He had had cases which had recovered.

Dr. Burroughs said that every one was agreed that an appendix should be taken out within the first 48 hours but the question is what to do on the third day. Ochsner advocated waiting until the appendix was localized, then opening and draining. The argument has been that waiting will not increase the operative mortality or the general mortality. During three years service at Augustana he saw but three deaths from this plan of treatment and these patients were moribund on admission. In his present work with an insurance company he has made a survey of deaths from appendicitis. This showed that there was not a single death before the first 48 hours or after the eighth day.

Dr. C. B. Semerak called attention to cases in which the patient presented symptoms of an acute appendicitis but on operation the appendix was practically normal. Even on microscopic examination no evidence of disease could be found.

Dr. G. W. Green cited three cases of ulcer of the terminal ileum reported by J. Shelton Horsley of Richmond, Va. The diagnosis in each case before operation was appendicitis. This is one of the things that must be borne in mind in diagnosing appendicitis.

Dr. E. W. Mueller, in closing, said Dr. Montgomery was correct in stating that typhoid fever is usually accompanied by leukopenia.

Dr. Breakstone mentioned the presence of pus in the urine in retrocecal appendix. Pus is also found in the urine when the appendix is close to the urinary bladder. In his paper he had reference to pus in the urine where there was a condition in the ureter or kidney simulating appendicitis. He said he had never had occasion to operate on a case of pneumonia in children simulating appendicitis.

Dr. Burroughs referred to the Ochsner treatment.

A. F. Hardt made a survey of some of the best surgeons in Pennsylvania and found they had practically discontinued the Ochsner treatment.

Dr. Garvy's suggestion concerning the lumbar stab wound in draining a retrocecal appendicitis is worthy of note.

## BLOOD TRANSFUSION

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CHICAGO

In our effort to combat mortality in both medical and surgical cases, blood transfusion has become a most useful agent in a large number of conditions where other therapeutic measures failed to meet the needs.

With a better understanding of its possibilities and its more frequent use, many cases formerly lost are now restored to health.

The first reference to this therapy was in 1492 when a Jewish physician attempted to save the life of Pope Innocent viii, using three boys as donors. The patient and donors, all died.<sup>1</sup> It is, however, in the past thirty years that the real advances in transfusion have been made. Murphy, Crile,<sup>2</sup> Pemberton and Horsley<sup>3</sup> are among those who did much to bring transfusion into favor, but the present impetus is especially due to the work of Moss on blood grouping and compatibility, published in 1910,<sup>4</sup> and the work of Lewisohn, on the use of citrate blood, published in 1915.<sup>5</sup> The citrate method is widely employed today, because of its simplicity; however, the great amount of work done since on the biochemical and biologic properties of the blood, and clinical observation, have convinced most workers in this field of therapy, that whole blood transfusion is preferable and in certain conditions distinctly indicated. Unger tersely states its relative fields as follows:

"Transfusion of whole, unmodified blood is the procedure of choice when blood is required as a tissue. When it is wanted merely as an aid to replenish an impoverished circulation with an adequate supply, citrate blood may serve as a substitute.<sup>6</sup>

The technique of whole blood transfusion, while more exacting than the citrate method, has been improved and simplified to such an extent that because of its many advantages, it should be the method of choice.

Some of the objections to the citrate method are ably summarized in the *Journal A. M. A.* of Sept. 29, 1923:<sup>7</sup>

Unfortunately the coagulation of the blood cannot be retarded by chemical agents without alteration of some of its biochemical and biologic properties. For example, sodium citrate leads to destruction of the blood platelets which apparently play an important part in the coagulation of the blood. The hemostatic properties of the circulation thus become impaired. The added chemical also develops anticomplementary properties in the plasma and reduces the phagocitic and opsonic powers of the blood. These facts would naturally argue against the use of the citrate method in the general infections where a resistance action is sought. The corpuscles are said to become more friable, a result particularly undesirable in certain types of anemia. There are occasional systemic reactions varying from slight malaise to severe chills and febrile symptoms, that may give the operator considerable concern.

Factors producing systemic reactions, excluding faulty blood typing, are changes in the blood cells, lowered temperature of the blood and altered chemistry.

*Indications:* Either citrate or whole unmodified blood may be used when the indication is to rapidly restore circulatory balance after severe hemorrhage as result of accident, operation or obstetrical. Also as a prophylactic measure before operation where the nature of operation indicates a large loss of blood, transfusion is a wise safeguard. Whole blood transfusion only, should be used preliminary to operation on poor operative risks with low resistance from prolonged illness and secondary anemias, and in cases of chronic infections and wasting diseases. In these cases it combats infection by increasing the general resistance and by the bactericidal action of the blood. It provides increased oxygen transportation to the tissues and rapidly increases coagulability. In jaundiced patients, repeated small whole blood transfusions will prepare them for and tide them over operation much better than will the calcium salts, lactates or glucose.

In hemophilia, melena neonatorum, gastrointestinal hemorrhage from ulcer, colitis, dysentery, uterine hemorrhage, both postpartum and abortion, nasal hemorrhage, and cholemia, our experience has been that whole blood transfusion has quickly increased coagulability, checked hemorrhage and raised hemoglobin and red cell count. The results in these cases have been uniformly gratifying.



Aside from hemorrhage and secondary anemias, we have obtained excellent results in cases of septic abortion with pelvic peritonitis, chronic empyema of the chest, syphilis of the stomach, amebic dysentery and chronic sepsis.

Our experience in acute and subacute infections has been similar to that of others, that it is of no apparent value. Likewise, in the primary anemias and leukemias the blood has shown a temporary rise in hemoglobin and red cell count with a rapid return to the initial picture or frequently a drop to a lower level. Our experience with convalescent serum has been limited to one case of a severe scarlet fever, where it was of undoubted value. This last phase of blood transfusion can be of specific value but would only be useful in large charitable institutions where convalescent patients are constantly available.

Conditions other than those enumerated in which transfusion has been reported to have been helpful, are gas poisoning, anuria and uremia. In the latter condition it has proven as satisfactory as decapsulation.

When transfusion is decided upon it has been our practice to use relatives of the patient whenever possible, both from the standpoint of prompt availability and expense. Properly approached, we have had little difficulty in obtaining their consent to act as donors. At first we matched donor and patient by the Moss method and checked it with the direct compatibility test. Lately we have used direct compatibility tests alone, and have had no reactions or hemolysis.

When professional donors are used, Wassermann tests should be taken immediately before transfusion, as cases of infection of patient have been reported where negative Wassermann reports were obtained from the donor five weeks before. Under the classification of Moss, the group to which a donor belongs may change. Ether anesthesia,<sup>14</sup> certain foods, repeated use of the donor, all have been shown to influence the grouping, so that compatibility tests just prior to transfusion should be a routine procedure. While we have used the same donor three and four times, whenever possible a new donor should be used for the same patient for each transfusion, as the patient's blood may develop iso-agglutinins towards the donor's blood. We have found that in seeking donors among

relatives for cases of hemophilia that male offsprings of the female members of the family, i. e., brothers or first cousins, are invariably incompatible. In the case of the new born babe, the mother's blood can be used without matching, as it is always compatible.

*Technique for compatibility.*<sup>16</sup> Four test tubes are prepared in two of which are five c.c. of a solution of sodium citrate in normal saline. One or two c.c. of blood is obtained from the vein of the donor and one drop is put into one of the tubes containing the citrate solution. The rest is emptied into one of the clean test tubes. Likewise, blood is obtained from the patient and divided in the two remaining tubes. All four tubes are marked for identification and are placed in an incubator at 100F for 15 minutes. We now have a suspension of corpuscles of donor and patient and serum of each. A loop of serum of donor's blood is mixed with a loop of suspended corpuscles of patient's blood and is examined in a hanging drop or on a glass slide, under the microscope. Likewise, a drop of patient's serum and donor's corpuscles are examined. If in either case there is hemolysis or agglutination, the two bloods are considered incompatible. It is very apparent that incompatible blood is of no value as an oxygen carrier.

We have occasionally used the citrate method of transfusion, but in the majority of cases the whole unmodified blood has been employed. We have used both the Percy<sup>18</sup> parafine tube and the syringe cannula technique of Lindeman.<sup>17</sup> Both have proven equally satisfactory, but as the Percy method requires trained assistants and means the exposure and ligation of veins in every case, the syringe cannula method has been used of late exclusively.

A refinement in technique suggested by Straus<sup>11</sup> has been of value. A perforated shoulder is attached to the cannula needle, so that after the needle is inserted into the vein, it is transfixated and prevented from slipping out by passing a cambric needle through the skin and perforation in the shoulder of the needle. He also suggests fixing the upper wall of the vein to the skin by a cambric needle to facilitate the introduction of the cannula needle.

Three 100 c.c. syringes are employed. One is used to draw the blood from donor, the second to inject the blood already drawn and the third

is washed in salt solution and citrate solution, so that one is always ready; 500 c.c. can be transfused in ten to fifteen minutes. To detect any untoward reactions the first 100 c.c. should be injected slowly. In cases in which large amounts of blood are transfused, one should guard against hypertransfusion. This is evidenced by patient giving short sharp coughs. When this occurs transfusion should be terminated at once.

*Conclusions.* The ease with which compatibility of donor and patient can be determined, the simplification of transfusion technique, and the remarkable results obtained in cases formerly considered hopeless, should encourage the physician to use this agency whenever indicated both prophylactically and curatively.

In acute hemorrhage both citrated blood and whole unmodified blood may be used to equal advantage, but in chronic infectious and wasting diseases where an elevation of resistance is desired, whole unmodified blood is distinctly indicated. Likewise in cases where rapid increase in coagulation of blood is wanted, whole blood should be used.

Blood transfusion is of little value in acute and subacute infections and in the primary anemias and leukemias.

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## PAINLESS GASTRIC CRISIS REPORT OF CASE

MANUEL E. LICHTENSTEIN, M. D.,  
CHICAGO

The gastric crises of tabes dorsalis may vary in intensity from the most violent to the least troublesome. Since Charcot first described them, clinicians have been alert to recognize early cases of neurosyphilis when crises are an initial symptom. However, the wide variation in character of these crises has afforded numerous opportunities for error.

Nuzum<sup>1</sup> in a study of one thousand cases of tabes found mistaken diagnoses responsible for ninety-seven unnecessary laparotomies. Woltman,<sup>2</sup> Edsell,<sup>3</sup> Fremont-Smith and Ayer<sup>4</sup> and others also report cases of gastric crises in which futile operations had been performed.

On the other hand, Eusterman<sup>5</sup> reports five cases of duodenal ulcer simulating tabetic crises. Fremont-Smith and Ayer<sup>6</sup> report a case of duodenal ulcer which went on to rupture before the attending surgeon would consider operation. Exner and Schwarzman<sup>7</sup> at autopsy found five cases of peptic ulcer and three of carcinoma in seventy-five tabetic patients.

It is obvious that in cases of gastric crises tabes may be overlooked and the symptoms attributed to some intra-abdominal pathology or tabes may be recognized and accompanying pathology overlooked.

Gastric crises may manifest themselves in attacks of severe pain associated with vomiting or in attacks of pain alone, or most infrequently in vomiting alone. It is in those cases where pain and vomiting occur or where pain alone occurs that mistaken diagnoses may lead to unnecessary operations. However, in that rare form where vomiting alone occurs the condition is most apt to be treated lightly and dismissed as a "gastritis" or a "dyspepsia," the true nature of the illness being unrecognized.

*Report of Case.* L. H., female, aged 20 years, entered Cook County Hospital on the service of Dr. L. C. Gatewood, November 3, 1925, with an admitting room diagnosis of acute gastritis. She gave the following history:

Nausea and vomiting had been present since October 30, 1925, i. e., for the last five days. The onset was sudden and vomiting occurred from five to six times daily. There was nothing characteristic about the vomitus. The appetite was good but eating of anything was immediately followed by emesis. This last until



November 5, 1925, i. e., for seven days. There was no abdominal pain or tenderness except for a feeling of soreness in the upper abdomen which came on the day before admission associated with the efforts at vomiting. Constipation had been present since the onset. Bowel movements had previously been regular. No colicky pains. No similar trouble previously. No other complaints.

Menstrual History: Began at 14, regular, and lasts three to four days.

Marital History: Married once in 1923. No children. No miscarriages. Is separated from her husband of whose physical condition she is unaware.

Family History: Father, mother, seven sisters and four brothers all living and well.

Examination shows a well developed, well nourished white female about 20 years of age, not appearing ill.

Pulse 84. Temperature 98.4. Respiration 24.

Head: Negative except for eyes.

Eyes: Pupils are unequal in size, irregular in shape and react poorly to accommodation and not at all to light.

Neck and Chest: Negative.

Abdomen: No distension. No scars or swellings. No tenderness or rigidity.

Genitals: External, negative. Internal, profuse vaginal discharge.

Extremities: Negative.

Reflexes: Knee, ankle, plantar biceps, triceps, abdominal all normal and equal on both sides.

Sensibility: Present and normal throughout.

Urine: Negative for sugar and albumin.

Blood Wassermann: ++

Spinal Fluid Wassermann: ++++

Pandy: +

Cell Count: 40 lymphocytes per cubic mm.

The diagnosis in this case was tabes dorsalis with painless gastric crisis. The gastro-intestinal disturbance arose suddenly and disappeared in the same manner. To the patient it was the first evidence that she had a disease. The presence of the Argyle-Robertson pupil was the first objective finding of the disease. The laboratory tests brought further evidence of the nature of the condition.

While tabes in a female of twenty is not common the absence of pain during a crisis is less common and the nature of the condition may therefore be unsuspected unless suggestive physical findings are present or appropriate laboratory tests are made.

2558 W. Chicago Ave.

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OUTLINE OF A ROUTINE EXAMINATION OF THE KNEE AND FOOT

PHILIP LEWIN, M. D.,  
CHICAGO

ROUTINE EXAMINATION OF THE KNEE

Inspection

Anatomical location of affected area as indicated by patient.  
D-formity-genu varum, genu valgum, genu recurvatum alignment torsion?  
Limp—Watch patient walk.  
Crutch or cane.  
Squat down sitting on heels.  
Kneel down on floor.  
Bony landmarks visible or obliterated.  
Swelling? Location.  
Atrophy? Location.

	Degree	Pain	Spasm	Area of Tenderness
Active flexion				
Active extension				

Audible crepitus.

Palpation

Is the skin over the knee warmer than over other?  
Measure both knees.

	Right	Left
Above Patella		
Over Patella		
Below Patella		

Patella mobility—Laterally Longitudinally  
Does it float?  
Can you pick up capsule above patella?  
Synovia thickened?  
Free Fluid? Milk the lower thigh toward knee to increase fluid.  
Exudate? Where?  
Bursitis?  
Tender areas? Sensitive areas?

	Degree	Pain	Spasm	Area of Tenderness
Forced flexion				
Forced extension				

Forced rotation  
Forced lateral motion  
Blow on heel transmitted to knee  
Palpable crepitus? Fine Coarse  
Loose bodies?  
Is aspiration indicated?

ROENTGENOGRAMS

Stereoscopic antero-posterior  
Stereoscopic lateral

ROUTINE EXAMINATION OF THE FOOT

Anatomical location of affected area as referred to by patient.

STANDING

Inspection  
Front View  
Deformity

Inversion	Eversion
Adduction	Abduction
Supination	Pronation
Varus	Valgus
Equinus	Calcaneus
Bunion	Hallux Valgus
Metatarsus Varus	Cavus
Thigh rotation	Leg rotation
Knock knees	Bow legs

Abnormal prominence of soft tissue  
Abnormal prominence of bones  
Discoloration

Side View

Alignment  
Cavus  
Metatarsal arch

Back View

Helbing sign, deviation of tendo achilles  
Abnormal prominence of bone or soft tissues

SITTING

Inspection  
Range of motions

	Active	Passive	Pain
Plantar flexion			
Dorsi flexion			
Inversion			
Eversion			

Muscle spasm (peroneals, etc.)  
Muscle paralysis  
Corns (hard or soft) Callouses Warts Bursitis  
Deformed toes

Palpation

Skin infection (epidermophyton, etc.)  
Perspiration  
Abnormal skin temperature  
Sensitiveness of various structures  
    os calcis—lateral borders      plantar surface  
    inner border of foot      outer border of foot  
    sustentaculum tali      os calcis  
    scaphoid      cuboid  
    cuneiform 1      metatarsal 5  
    metatarsal 1  
Heads of metatarsals  
Taut plantar fascia sensitiveness  
Extensor tendons of toes contracted?  
Crepitus?

WALKING

Naturally or unnaturally  
Toe walking  
Heel walking

SHOES

Examination of shoes patient is wearing

ROENTGENOGRAMS

Antero-posterior  
Lateral  
Stereoscopic

104 South Michigan Avenue.

BRONCHIAL ASTHMA AND ITS RELATION TO PULMONARY TUBERCULOSIS\*

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CHICAGO

Up to within recent years, the theory was prevalent that tuberculosis and asthma are rarely associated, that cases of asthma rarely develop tuberculosis and that the two diseases are antagonistic to each other. Fishberg quotes Brugelmann as saying that "as long as one has asthma, he is immune to tuberculosis," and West is of the opinion that "phthysical patients very rarely suffer from spasmodic asthma, and if an asthmatic patient becomes phthysical, an event which is by no means common, the asthma usually disappears." Of late, however, this theory is being disproved, and the fact of the frequent association of asthma with pulmonary tuberculosis is being generally recognized. The more frequent examination of the sputa of asthmatic patients, and the finding of tubercle bacilli in many cases has shown the fallacy of the old theory.

A study of seven hundred (700) cases of asthma by Soca, indicated that a large proportion (five hundred) were associated with pulmonary tuberculosis. Pottenger stated in 1917 that "contrary to the usual opinion that a person with tuberculosis does not have asthma, at the present time, out of seventy-five (75) patients in the Pottenger Sanatorium, seven (7) of them suffer from asthma." We found at the Grand Crossing Dispensary, out of forty-nine (49) cases with tubercle bacilli in their sputa, under supervision at their homes, six (6) were cases of tuberculosis with asthma, more than ten per cent of the open cases.

From the records of dispensaries of the City of Chicago Municipal Tuberculosis Sanitarium, Mt. Sinai Hospital and the Cook County Hospital, we have collected fifty-one (51) cases of

\*With a report of 51 cases having tubercle bacilli in the sputum.  
\*From the Municipal Tuberculosis sanitarium. Medical service of Mt. Sinai and Cook County hospitals.



asthma associated with pulmonary tuberculosis, with *tubercle bacilli present in the sputa of these cases*. From fourteen (14) of these cases a history of exposure to tuberculosis was obtained, and contacts of twelve (12) of the cases were found to be tuberculous.

An interesting record is that of J. J., a man eighty years of age, who came to the Grand Crossing Dispensary for examination and gave a history of asthmatic attacks over a period of thirty years. A diagnosis of pulmonary tuberculosis was made in this case, with a complication of asthma. Sputum analysis showed the presence of tubercle bacilli. This was the first time the patient had had his sputum examined, although he had been treated by several physicians, all of whom made a diagnosis of asthma, but did not

suspect the presence of tuberculosis and did not analyze his sputum. The significant fact in this case was that two daughters and one son died of pulmonary tuberculosis and two of the grandchildren were diagnosed as having glandular tuberculosis.

Another interesting case, that of R. C., illustrates the tendency of the physicians to make a diagnosis of asthma without suspecting the presence of pulmonary tuberculosis, and because of the supposed rarity of the association of the two conditions, to fail to analyze the sputum in these cases. This patient had not been cooperating with the dispensary, had six small children, poor home conditions, and was reported as a menace to his family by the quarantine officer of that district. We succeeded in obtaining a specimen of sputum and it was reported to be positive. When a copy of the law regarding the observation of open cases of quarantine rules and regulations was given

CHART 1

SPUTUM RECORDS OF CASES OF ASTHMA WITH TUBERCLE BACILLI IN SPUTUM, SHOWING NEGATIVE AND POSITIVE RESULTS EACH YEAR

	1917		1918		1919		1920		1921		1922		1923		1924		1925	
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
J. L.	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. C.	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. B.	.....	.....	.....	.....	.....	.....	4	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
R. M.	.....	.....	.....	.....	2	0	1	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
A. P.	.....	.....	2	2	.....	.....	0	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
C. D.	2	0	9	0	6	2	5	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. F.	.....	.....	.....	.....	.....	.....	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. H.	.....	.....	.....	.....	1	1	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
S. M.	.....	.....	.....	.....	.....	.....	3	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
A. H.	.....	.....	.....	.....	.....	.....	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
A. R.	.....	.....	.....	.....	.....	.....	2	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
S. S.	.....	.....	0	1	0	1	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. B.	0	1	.....	.....	.....	.....	.....	.....	1	0	.....	.....	.....	.....	.....	.....	.....	.....
C. P.	.....	.....	1	0	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
T. B.	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B. D.	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
A. C.	.....	.....	.....	.....	0	1	0	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
E. H.	.....	.....	2	1	3	3	4	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
M. D.	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
P. A.	.....	.....	.....	.....	.....	.....	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
E. L.	.....	.....	.....	.....	.....	.....	2	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
W. A.	.....	.....	.....	.....	.....	.....	1	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
R. C.	0	2	.....	.....	.....	.....	1	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. K.	.....	.....	.....	.....	.....	.....	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
W. M.	0	3	0	2	0	2	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
K. R.	0	1	0	1	.....	.....	1	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
R. B.	.....	.....	.....	.....	.....	.....	1	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
E. K.	.....	.....	.....	.....	.....	.....	2	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
L. M.	.....	.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. J.	.....	.....	.....	.....	1	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. S.	.....	.....	.....	.....	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
E. C.	.....	.....	.....	.....	.....	.....	3	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
A. T.	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. W.	3	0	4	0	3	0	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
A. S.	0	2	0	2	0	3	0	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. C. A.	0	2	0	3	.....	.....	2	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
G. H.	.....	.....	.....	.....	0	2	0	3	1	2	3	2	0	4	1	4	0	4
A. D.	.....	.....	.....	.....	.....	.....	.....	.....	0	3	2	3	0	3	1	3	.....	.....
L. C.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	3	1	3	0	3	.....	.....
M. M.	.....	.....	.....	.....	.....	.....	0	1	0	2	0	3	0	2	1	3	.....	.....
C. J.	.....	.....	.....	.....	.....	.....	1	3	0	4	1	3	0	3	0	3	.....	.....
H. E.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	3	0	4	0	4	1	3
L. W.	.....	.....	.....	.....	.....	.....	.....	.....	0	3	1	3	0	2	1	3	0	4
S. H.	.....	.....	.....	.....	.....	.....	1	2	1	3	0	3	0	3	0	4	.....	.....
M. I.	.....	.....	.....	.....	.....	.....	0	2	1	3	0	3	0	3	0	4	.....	.....
O. S.	.....	.....	.....	.....	.....	.....	0	1	0	3	1	2	0	3	2	1	1	3
H. W.	.....	.....	.....	.....	.....	.....	0	2	0	3	0	3	0	2	2	0	2	1
W. D.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	2	1	2	1	3
T. R.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	0	1	3	0	0

CHART II

Monthly Sputum Records During 1924

Case	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
G. H.	—	—	—	—÷	.....	.....	.....	.....	.....	.....	.....	.....
A. D.	.....	.....	.....	.....	.....	.....	.....	÷	.....	.....	.....	.....
M. M.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	÷	.....
L. W.	.....	÷	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
O. S.	.....	.....	÷	.....	.....	.....	÷	.....	.....	.....	.....	.....
H. W.	.....	.....	.....	÷	.....	.....	.....	÷	.....	.....	.....	.....
W. D.	.....	.....	.....	.....	—÷	.....	.....	.....	.....	.....	.....	.....
T. R.	—	.....	.....	.....	.....	.....	.....	.....	.....	—÷	.....	.....

him, he went to three physicians in his neighborhood who examined him and told him that he had asthma but no pulmonary tuberculosis. Not one of these physicians took the trouble to examine his sputum, because they were probably familiar with the old theory of the rarity of the association of asthma and tuberculosis. On the strength of the positive sputum record, however, he was hospitalized and later his cooperation secured.

In this city where quarantine rules and regulations regarding the isolation of open cases are strictly enforced, these cases present a difficult problem. They have perhaps been treated for bronchial asthma for a number of years without suspecting the possibility of their having pulmonary tuberculosis. When the sputum is examined and tubercle bacilli found it is a difficult matter to persuade these patients that they have pulmonary tuberculosis, that they can infect their contacts with this disease, and must follow rules of conduct as laid down by the Department of Health.

The following is such a case admitted to our service at Mt. Sinai Hospital.

Mrs. K., age 50 years, housewife, who has suffered for the past twelve years with bronchial asthma, was admitted to our service at Mt. Sinai Hospital because of severe pulmonary hemorrhage. Patient was an obese woman who did not look very ill. Temperature 99°-100°. Pulse 80-90. Respiration 24-28. Chest emphysematous. Right apex was dull but rest of chest hyperresonant on account of emphysema. On auscultation broncho-vesicular breath sounds and numerous moist rales were heard over right apex but over the remaining portion of both lungs, many musical, sonorous rales were heard. Sputum examination was positive for tubercle bacilli on repeated examinations. This woman, who was an open case of pulmonary tuberculosis, was never before suspected of tuberculosis and coming into intimate contact with many children and infants was probably the cause of infection of many of them.

The sputum records in charts 1 and 2 illustrate the value of repeated analyses, not only several times a year, but over a period of years, as long as the asthmatic condition persists. In the case of J. C. A., the sputum was found to be positive in 1910, repeated analysis each year proved to be negative until 1920, when the sputum was again positive. Analysis of the sputum of W. M., over a period of four years was persistently negative until 1920 when it was found to be positive. As will be noted on the charts, cases have had negative sputum in one year and positive in another, and this is also true of the

1924 monthly sputum records, (Chart 2) which show the monthly change from positive to negative, and vice versa in these cases.

CHART 3

Age	No.	Sex	
		Male	Female
Below 20 .....	1	0	1
21 to 30 .....	12	4	8
31 to 40 .....	14	8	6
41 to 50 .....	11	8	3
51 to 60 .....	6	3	3
61 to 70 .....	5	3	2
71 to 80 .....	2	1	1
Total .....	51	27	24

Twenty-seven (27) of the fifty-one (51) cases were males, and twenty-four (24) females. Most of the cases are from twenty to fifty years old. From the age of twenty to thirty, the females are more in number, from thirty to forty the sexes are about equal, from forty to fifty there is a marked predominance of males, from fifty to eighty, the sexes are about equally involved.

The presence of tubercle bacilli in the sputum of the aged patient is of more than passing interest. In these grandmothers and grandfathers, who have what is thought to be nothing but asthma, and in who pulmonary tuberculosis is not suspected, we have a source of tuberculosis infection that has been overlooked and is generally not recognized. The aged, grandparents, old, harmless (?), asthmatic, coughing about the home for fifteen or twenty years, playing with and fondling the children, are factors in the dissemination of tuberculosis. Many aged people suffering with chronic bronchitis and asthma are really cases of chronic pulmonary tuberculosis. The disease in these cases is of a very benign character and marked fibrosis is present. The pulmonary fibrosis and the cough give rise to the emphysema and the attacks of bronchitic asthma, thus establishing a vicious circle. This source of infection should be inquired into when obtaining a history of exposure to tuberculosis.

Although the tuberculosis in itself is often of no serious consequence to the patient, he is therefore the greater menace as a distributor of tubercle bacilli.

Pathological statistics show that in infants dying during the first two years of life, tuberculosis is a very important cause, some sources reporting as high as 50%. In the dissemination of tubercle bacilli, which is practically universal, these cases play a much more important role than the known tuberculous, who either properly take care of their sputum and avoid or are avoided by others.



The most common symptoms in these cases, besides cough, dyspnea, and cyanosis, were rapid pulse, fever, loss of weight, pain, night sweats and hemoptysis. Acceleration of the pulse and loss of weight were present in forty-one of the cases or 71%. Pain in the chest was present in thirty-six (36) cases, or 70%. Fever in thirty-two (32) cases, or 60%; night sweats in twenty-six (26) cases, or 50%, and hemoptysis in sixteen (16) cases, or 30%.

#### CONCLUSIONS

1. Asthma associated with pulmonary tuberculosis is more common than is generally recognized.

2. The theory that patients with asthma do not have tuberculosis, and that patients with tuberculosis do not have asthma, is disproved by the records of the Dispensaries of the City of Chicago Municipal Tuberculosis Sanitarium, Mt. Sinai Hospital and the Cook County Hospital.

3. A history of asthma in the family should be carefully inquired into when obtaining a history of exposure to tuberculosis.

4. Asthma is an important factor as a source of tuberculous infection.

5. Repeated sputum analyses every year should be made on asthma cases for possible presence of tubercle bacilli in the sputum.

6. The most common symptoms besides cough, dyspnea and cyanosis, in asthma cases with pulmonary tuberculosis, are rapid pulse, loss of weight, pain in the chest, fever, night sweats, and hemoptysis.

7. Chronic bronchitis, asthma and emphysema, a common complex in elderly people, is frequently a result of tuberculous disease, and those suffering with this condition should avoid intimate contact with children and infants.

310 S. Michigan Avenue.

#### A PRECIPITATE LABOR IN A PRIMIPERA, A DROWNED BABY, RESUSCITATION OF THE BABE AFTER LAPSE OF MUCH TIME

O. J. BALDWIN, M. D.  
CHICAGO

This newly born baby was delivered in precipitate labor while the mother sat upon the stool, supported, one on either side, by two neighboring women.

On my arrival at the home (a private home) all indications pointed to very unusual circumstances. I hastily entered the home and found just such a condition as stated in my opening.

Collecting my wits included many things and wondering what step to make first, while going through a sterilizing process, with the help of the husband who had arrived a short time previously I planned an examination to determine if the babe was delivered and if still alive.

The husband raised the mother sufficiently to afford a hasty examination which revealed baby was delivered and was dead from drowning.

We placed them in a warm bed, the husband carrying the mother while I supported the babe. This done I hastily divided the funis and placed the babe upon a table in a warm room. The first maneuver was to suspend it by the feet for a short time; immediately the frothy blood stained water ran from the mouth. It was then placed on the table face down and head and shoulders low while its weight was supported by the left hand all the time gently compressing the chest and alternately raising the shoulders. Each time the movement of lowering the head and chest with compression of the chest was followed by more water from the mouth. This was continued for some time till the water seemed to be well drained from the lungs. Then the babe was placed on the back while the lungs were gently filled with air forced through a thin cloth into the mouth and air passages, this maneuver was alternated with one described above, many times and how long a time I do not know but just as I was ready to give up the babe inspired very feebly though enough to inspire me to continue, which I did, it seemed an hour, though I did not time the effort. At last the inspirations occurred every half minute. If the artificial effort ceased the inspirations would also, so they were continued till inspirations occurred more often, say fifteen times per minute. Then the artificial effort was discontinued and from that time the babe has had an uneventful existence. She (girl baby) is now nine months old and weighs eighteen pounds, a pretty, and mother says "a good baby."

Of course I expected it would develop pneumonia if it lived long enough, but not so.

#### THE WHOLE STORY MAY BE INTERESTING

Dr. Knox of 1329 Madison Street, Forest Park, had been engaged to officiate at this birth which

was not expected till thirty days later. When it happened Dr. Knox was just starting a surgical procedure at the West Suburban Hospital, Chicago, when the hurry call came. He was very much agitated and asked the writer to go in his stead. Exceeding the speed limit all the time I at last reached the place to find things as related above.

At the home the mother was on the back stoop with neighboring women, when she was seized with pain. Not knowing what it meant she asked the friends to help her to the closet, which they did.

Dr. Knox arrived later and a badly lacerated perineum was repaired. Both mother and babe had an uneventful recovery.

360 N. Laramie Avenue.

## THE PREVALENT EPIDEMIC OF QUACKERY\*

B. H. KING, M. D.

GRANITE CITY, ILLINOIS

You have all heard of the doctor who would never eat roast duck because the impolite animal had always been so personally insulting to him in its remarks. Doubtless you may wonder if I am not also a bit impertinent in choosing a subject of quackery as a theme of talk before physicians who despise irregularities. I assure you it is not because I suspect you of infidelity. I simply wish to give you a hint of the difficulties and temptations we encounter as physicians loyal to science and modest self respect.

Quackery may be likened to a poor artificial eye, everybody else can see through it but the patient, but however disgusting, the fact is explainable. The deep seated grudge and suspicion of the populace for scientific medicine and the secret love with which it turns toward its magic, mongering humbuggers is evolutionally but a survival of the time when medicine was nothing but a magic, an atavistic return to primitive modes of thought and therapeutic superstition. The scientific student of sociology watches the inrooting of institutional weeds and fruitless brush, that the future civilization must grub out and burn with costly labor and sacrifice.

The student of heredity and psychology sees

the hardening of modes of thought and habit that must bring only pain or misapplied function. The sincere physician sees disease permeating unborn babes, and scientific progress crippled and unutilized by reason of popular perversity.

But a further explanation of the peculiar and rejuvenated power of modern medicine and charlatanism consists in the fact that it is not only a survival of half-extinguished medieval fires, flaming up with temporary and dying brilliancy, it is also a "combine" with modern civilized money making and unscrupulous politics.

One lunacy overtaking the people is "Christian Scientists" or "Faith Curers." Would you think it possible that any sane person could believe that a boil or carbuncle is inflamed or painful, that hemorrhage and decomposition are but thoughts and beliefs, that carcinoma, diphtheria and typhoid fever can be cured by prayer or thinking hard at it?

Take another national disgrace, the patent medicine shame. Even semi-barbarous countries have forbidden the entrance within their limits of these vile concoctions, devised to empty the pockets of poor, while filling their systems with poison. Thousands of poor babes have been killed by soothing syrups, containing no opium or other hypnotic.

What a farce that people should buy a "cure-all" containing they do not and cannot know what, compounded they do not know by whom, certainly not by a physician, vouched for by no one—an evident bit of hoodooism to get money—a shot gun prescription fixed at a disease in the abstract, an unknown remedy for an unknown disease, from an unknown hand!

And yet the millions upon millions of dollars invested in these nostrums, and thereby annually filched from the ignorance and want of the poorest and neediest, should arouse even the most corrupt of legislators to put a stop to it all. The superlative impudence of the villianous syndicates is degrading and wrecking the once noble profession of pharmacy, and turning the disgust of the reader and traveler into nausea by the pollution of every newspaper and of every landscape with sickening advertisements.

Why in our country the refuge and asylum of the survival superstitions, the delirious nonsense and financial schemes that Europe has kicked out in wrathful disgust, simply this—the newspapers, journals and magazines dare not tell the

\*President's address; read before the Madison County Medical Society, June 4, 1926.



truth or be the means of telling the truth. Every magazine or serial depends for existence upon two sources of revenue, its subscribers and its advertisers. Let a journal or paper publish an article exposing the "infamy," and "*stop my subscription*" would come from dozens and dozens of people. These same subscribers have never studied such things a minute, hence no editor dare admit an article showing up the shame and wrong of these things.

Physicians and other scientific men have nothing to sell, nothing to advertise, but all quacks, nostrum venders and patent medicine men *have* something to sell, and their advertisements form a tremendous source of revenue to every paper in the land.

What is the treatment of this terrible disease—"Quackery"?

*Combination* is the order of the day in the world of trade.

What is done for selfish reasons may be done for unselfish ones.

The patent medicine men have got every druggist and every newspaper in the United States in their determined grip. The chiropractors meet in regular sessions and devote their entire energies and time to schemes for getting State and Governmental money and aid, and for grasping every pecuniary and social advantage.

In our lofty scorn of such low cunning, and in our intense preoccupation with disease and its cure, we seldom raise a finger toward meeting such attack, seldom try to instruct the public in its medical duties and self interest.

If as a profession we did devote a small part of our collective energy and intellect to these things, quackery would disappear.

Realize the condition of the farmer and workman, uneducated undiscriminating; these are the bulk of our people.

With almanacs and circulars, the advertisements, fictitious certificates and false promises of the nostrum traders and the quacks reach his mind and feed it with falsehoods.

The family physician is squeezed aside, and his testimony against these frauds, if he have the frankness to denounce them, is credited to jealousy. As physicians charged with the health of the present and future, our duty must become clear. The entire lot of "pathies" and "isms," the morbid cranks, drunk with ignorance

and conceit, the sly advertising schemers, the tricks and frauds of medical parasites, the patent medicine disgrace, all these things must be choked out of existence.

It is warfare, not a compromise, we are confronting, and for the sake of the simplest selfishness, for the love of our children, for the sake of civilization and humanity, let us turn our undivided efforts toward the way that leads to Education and Health.

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#### TREATMENT OF INTRACTABLE GONORRHEA IN WOMEN

The treatment of an average case of gonorrhea varies widely with the physician. There are several different courses of treatment which if followed with sufficient persistence will result in a clinical cure. There is a class of cases of severe endocervicitis which proves very stubborn, and for which several radical schemes of treatment have been offered. According to Brady:

"Some men use iodine, others argyrol, others silver nitrate, while still others, more radical, apply pure carbolic acid to the cervix.

"The fact that such a large proportion of these patients is eventually operated upon indicates that the usual procedures prove unsuccessful in a large percentage of cases.

"Radical cauterization of the servix, first advocated by Guy Hunner, should be here mentioned as a method of distinct value, as it often greatly lessens the discharge, is simple in technic and generally can be done without an anesthetic."

Mercurochrome-220 in 1 or 2 per cent solution was used in the local treatment of gonorrhea almost as soon as it was put on the market, but seemed to most physicians of no marked benefit. An English writer has advised treatment of vulvo-vaginitis of female children by painting the entire upper portion of the vagina with 20 per cent mercurochrome.

Brady recommends for chronic gonorrhea endocervicitis of women, painting the entire endocervix with 20 per cent mercurochrome. It causes less local reaction, he says, than either iodine or 10 per cent silver nitrate. He considers it perfectly safe in this strength, and quotes a number of cases to show that it has been efficient where other measures used over months had failed.

In a paper read before the Southern Medical Association in Dallas treatment of persistent gonorrhea with 10 per cent mercurochrome was reported to give unusually good results. It was perhaps as efficient as the 20 per cent, and if it should be found as effective in a larger number of cases, should of course be used in preference to the 20 per cent strength.

Efficiency of mercurochrome in gonorrhea, apparently is intimately dependent upon the concentration in which it is used. Mercurochrome has remarkable "sticking" properties: that is, when applied to an injured tissue it is much more slowly washed away by

the natural discharges than are most antiseptics. An application of it can thus act for a considerable time. It is perhaps to this quality that it owes its effectiveness.—*So. Medical Journal*.

### THIS CAN'T BE TENNESSEE

Lady: "Why have they let all the monkeys out of their cages?"

Zoo Attendant: "Holiday, mum. This is Darwin's birthday."—Stanford Widow.

### SURE LAZY

"Rasstus, your dog seems to be in pain."

"Nossuh, he ain't in pain—he's just lazy."

"But surely he must be suffering or he wouldn't howl like that."

"Jes' plumb laziness, jes' laziness—he's sittin' on a thistle."

## Society Proceedings

### ADAMS COUNTY

December 13, 1926.

This was the annual meeting of the society and was called to order by the President at 8:15 P. M. with thirty-two members present.

Dr. Harold Swanberg reported the Radiological Society meeting held at Milwaukee this month. Dr. Aldo Germann reported the interesting Post-Graduate Association medical meeting held at Cleveland in October. Dr. H. J. Jurgens reported the American College of Surgeons meeting held in Montreal in October. Dr. C. A. Wells reported the Mid-West Association of Anesthetists and Clinical Congress of the Kansas City Clinical Society held in Kansas City in October. Dr. J. E. Miller reported an interesting case of acute septic endocarditis. This was discussed by Drs. Jurgens and Center. Dr. J. A. Koch presented a patient suffering from multiple fibromata, which proved most instructive.

The Secretary read a letter from the American Society of Heat and Ventilation Engineering concerning the importance of the school ventilation problem. This letter was referred to the Public Health Committee for their consideration. The Secretary also read a letter from the White Cross concerning anti-narcotic legislation which is up before Congress at the present time, referred to the Public Health Committee for consideration.

At this time the annual reports of the officers were received. Dr. C. A. Wells, President, spoke upon the splendid progress that the society had made during the past year and thanked the profession for their wholehearted cooperation. Dr. Swanberg read the Secretary's report. This report is to be published in the *Bulletin*. Dr. Swanberg then read a report concerning the *Quincy Medical Bulletin*. Dr. Center made a motion seconded by Dr. Stevenson that the Secretary

be reimbursed for the deficit that had been incurred in the publishing of the *Bulletin* during the past year. Dr. Swanberg moved that the motion be tabled but this failed because of no second. The original motion was then carried. Dr. J. A. Koch presented a very complete report of the condition of the Treasury and showed that there was a balance of \$146.52 in the bank, which included \$2.44 of accrued interest for the year. The usual Honorarium for the Secretary was allowed.

At this time the annual election took place, which resulted as follows: Dr. Grant Irwin, president; Dr. A. H. Bitter, first vice-president; Dr. Aldo Germann, second vice-president; Dr. Harold Swanberg, secretary; Dr. Milton, assistant secretary; Dr. J. A. Koch, treasurer; Dr. T. B. Knox, delegate; Dr. Walter Stevenson, alternate delegate; Dr. Ralph McReynolds, medico-legal member; Dr. C. A. Wells, member board of censors; Dr. E. B. Montgomery, library committee.

At this time the President appointed Drs. Williams and Center to convey the newly elected President, Dr. Grant Irwin to the chair. Dr. Irwin spoke his appreciation of the honor conferred upon him and pledged himself to do everything possible in the interest of the society.

Considerable controversy arose concerning the question of dues for the coming year. It was finally decided that the dues be placed at \$15.00 for the coming year. On motion of the Secretary \$100 was appropriated for the entire expense of publishing the *Bulletin* during 1927. The entire arrangements for the January meeting was placed in charge of the old Entertainment Committee of which Dr. Grant Irwin was chairman.

The meeting adjourned about 11:15 P. M.

HAROLD SWANBERG, M. D.,

Secretary.

### BOND COUNTY

The Bond County Medical Society met for its fourth and last meeting for the year 1926 in Judge John Bigg's office in the courthouse at 1 p. m. with a good attendance considering the weather and roads. The following officers were elected for January, 1927: President, Dr. L. J. Cordonnier of Greenville; vice-president, Dr. R. L. Holcome, Pocahontas; secretary, and treasurer, Dr. W. F. Easley, Greenville; censors, Drs. J. H. Gordon and D. R. Wilkins of Pocahontas, and Dr. K. B. Luzader of Greenville; delegate to state society, Dr. L. J. Cordonnier; alternate, Dr. R. L. Holcome.

The Society was favored with a lecture from Dr. M. E. Rose of Decatur on "Stomach and Bowel Disorders." He dwelt some on constipation, its causes and remedies. Dr. C. C. Chapin, also from Decatur, spoke on "Mental Deficiency in Our Public Schools," giving his views, and that the doctors should take some active part to remedy this condition. The last on the program was Dr. I. H. Neece from Decatur. Subject, "What the State Society Was Doing for Medical Education in Illinois." The paper covered the duty of the State Society to the County Society, and the duty of the county to the state, the state protective department



especially, the defense in all malpractice suits. The Society extended a vote of thanks to the Decatur doctors and to the visitors. This meeting was some uplift to the doctors of Bond County and was greatly appreciated by all present.

### COOK COUNTY

#### CHICAGO MEDICAL SOCIETY

*Regular Meeting, December 1, 1926*

1. A Permanent Home (Medical and Dental Arts Club) .....Mr. Frank Loesch
2. The Abduction Treatment for Fracture of the Neck of the Femur.....  
.....Royal Whitman, New York, N. Y.  
General Discussion.

*University of Illinois Program, Dec. 8, 1926*

1. A Study of Peptic Digestion of Cow's Milk Mixtures Used in Infant Feeding..Julius H. Hess
2. The Diagnosis and Treatment of Bronchiectasis .....C. A. Hedblom
3. Some Aspects of the Obesity Problem.....  
.....R. W. Keeton
4. Behavior Clinic. Presentation of a Behavior Case .....Herman Adler

*Regular Meeting, December 15, 1926*

- Recent Advances in Nutrition Research.....  
.....Helen S. Mitchell, Battle Creek, Mich.  
Discussion—Solomon Strouse.
- Some Dangerous Diet Fads.....  
.....John Harvey Kellogg, Battle Creek, Mich.  
Discussion—Prof. A. J. Carlson, University of Chicago; A. C. Ivy, Northwestern University.

### CRAWFORD COUNTY

The annual meeting of the Crawford County Medical Society was held Thursday night at 7 p. m. in the library of the Robinson Hospital. The meeting was called to order by the president, Dr. J. B. Cato of Hutsonville. The following officers were elected for 1927: President, Dr. A. G. Meserve; Vice-President, Dr. L. B. Highsmith; Secretary-Treasurer, Dr. J. W. Long; Board of Censors, Drs. G. H. Henry, B. L. Price and C. H. Voorheis.

Dr. A. G. Meserve gave a very interesting and instructive talk on "Public Health," taking up the subject of toxin-antitoxin serum immunizing children against the dreaded disease of diphtheria. It was voted by the society that a certificate be issued to each child who took the prophylactic treatment and a uniform nominal fee will be charged.

The subject was discussed by all members present and they thanked Dr. Meserve for presenting it to the society as a stride forward to eradicate diphtheria. Dr. A. L. Lowe, Jr., gave a very interesting talk on the subject of "Fracture of Femur." He presented to the society skiagrams of fractures of the femur, showing the results obtained. The reduction of the fracture from a few days from the time of injury to the dismissal of the patient.

In the general discussion many points of interest in treating fracture of the femur were brought out. The

retiring president of the society gave a short talk concerning this year's society and thanked the members for their cooperation of making this one of the best years of the Crawford County Medical Society.

After a few remarks by the secretary the meeting was adjourned.

J. W. LONG,  
Secretary.

### GREENE COUNTY

The regular meeting of the Greene County Medical Society was held in Roodhouse, Friday, Dec. 10, 1926. The meeting was called to order by President Dr. O. L. Edwards, in the parlor of Hotel Roodhouse at 11:30 a. m. The secretary read a communication from the Illinois State Medical Society placing Dr. James H. Squire of Carrollton on the honor roll of the society. The secretary was instructed to inform Dr. Squire that he has also been made an honorary member of the Greene County Medical Society.

The annual report of the secretary was read and approved. The society next proceeded to the election of officers. Dr. A. K. Baldwin of Carrollton was elected president. Dr. N. J. Bucklin of Roodhouse was placed in nomination for vice-president. Dr. J. S. Billings was elected to the office of vice-president. Dr. W. H. Garrison of White Hall was elected to the office of secretary-treasurer. Dr. Edwards was elected for censor. The society then adjourned and enjoyed a splendid dinner at Hotel Roodhouse, for which we are indebted to the physicians of Roodhouse.

At 1:30 p. m. the meeting was reconvened in the parlor of the Christian Church. Dr. H. W. Smith presented a highly interesting and instructive report of a "Case of Traumatic Pericardial Effusion." Dr. F. N. McLaren read a timely and very practical paper on "Winter Remedies." Each of these papers called forth a free discussion and profitable exchange of ideas. Dr. F. A. Norris of Jacksonville next addressed us on the subject "Subnormal Surgical Risks," the doctor's paper was lucid, practical and of much value to the general practitioner, especially in relation to the care and treatment of the subnormal surgical case, preparatory to sending the patient to hospital for operation. He also gave us some valuable points in prognosis and in the post operative treatment of these cases. We feel that we were fortunate in securing Dr. Norris for this address.

We next listened to a brief talk by each of the ministers present: Rev. Mr. Bass of the Christian Church, Rev. Mr. Armstrong of the Methodist Church, and Rev. Mr. Claxon of the Baptist Church, which we appreciated very much, as each address brought out some points of contact between the work of the physician and minister, and evidenced an appreciation of the work that is being done by the regular medical profession, for the physical good of man.

The censors reported that our next meeting will be held in Carrollton, March 11, 1927.

A rising vote of thanks was extended Dr. Norris for his excellent address, to the physicians of Roodhouse for entertaining us so royally and to the officers

of the Christian Church for the use of their beautiful and convenient church parlor for our meeting.

Meeting adjourned.

### LEE COUNTY

The Lee County Medical Society held its Fall meeting at the Dixon State Hospital on Tuesday, November 23, 1926. Dr. Warren G. Murray, Superintendent, and his staff entertained a number of the visiting doctors during the afternoon with an inspection of the many activities in this large hospital. A very excellent dinner was served at 6:30 p. m., following which Miss Dougherty (chief nurse) presented some of her pupils, patients of the institution, who entertained with songs, dances and music. Miss Puffer had some of her pupils present a Punch and Judy show. This entertainment was doubly interesting because it was furnished by some of the mentally deficient patients.

Dr. Warren G. Murray and his staff presented some very interesting types of mental deficiencies and types of epilepsies, including macro-cephalic and micro-cephalic, and "Mongolianism" also of "Cretonism." This was a most interesting clinic.

Dr. Peter Bassoe, Clinical Professor of Neurology, Chicago University, School of Medicine, read a very interesting paper on "Prognosis and Treatment of Syphilis of the Nervous System—Especially of General Paresis."

Dr. Wm. Henry Holmes, Associate Professor of Medicine, Northwestern University, School of Medicine, read an interesting paper on "Diet in Disease" referring in particular to diet in diabetes and illustrated with blackboard demonstration a method of estimating proper porportion of foods.

After thanking Dr. Warren G. Murray and his staff for their kind invitation and excellent entertainment, the meeting adjourned. There were fifty-eight doctors and fourteen nurses in attendance at this meeting.

DR. KENYON B. SIGNER,  
Secretary.

### PIKE COUNTY

The Pike County Medical Society met in Barry, December 9.

Members of the society and guests were entertained at dinner at the M. E. Church where the ladies served a bounteous feast of fried chicken and lots of other good things to go with it.

In the absence of the president the meeting was called to order by the secretary, and there being no business of great importance to come before the meeting the order of business was transposed, the papers being given first.

The first paper was "Surgery in Relation to Neurasthenic Conditions" by Dr. J. E. Miller, of Quincy. He told of the importance of surgical intervention where positively indicated, and spoke of the importance of the cheerful encouraging attitude of everyone coming in contact with the patient, and this especially after operation, where such procedure has been necessary.

This paper was well received and much appreciated by everyone present.

The second number was "Endocrine Disorders In Their Relation to Other System Diseases," by Dr. Wm. Engelbach of St. Louis, Mo. This lecture, illustrated with many lantern slides was given as only a master of the subject could give it, and all present were a unit in pronouncing it by far the best presentation of the subject they had ever heard and we consider we were fortunate indeed to get Dr. Engelbach for this lecture.

The third number, "A Backward Glance" was a talk by Dr. W. E. Shastid of Pittsfield on practice sixty years ago compared with practice now. He read a number of excerpts from a copy of the *Boston Medical and Surgical Journal* of 1866, also an original article by his father, the late Dr. T. W. Shastid, published in that journal. This paper was indeed very interesting and entertaining as well, and thoroughly enjoyed by all who heard it.

F. N. WELLS,  
Secretary.

### WILL-GRUNDY COUNTY

The following officers of the Will-Grundy County Medical Society, have been elected for 1927: president, Frank Rich; vice-president, Roscoe Whitman; secretary, Lawrence Wilhelmi; treasurer, Bernard Klein; delegate, H. W. Woodruff; alternate delegate, A. J. Lennon; board of censors, W. H. Wilson, and medico-legal advisor, W. R. Fletcher.

Since the resumption of our weekly meetings in October we have had a very good attendance every week and our speakers have been men who are among the leaders in their special branches.

The following men have addressed us this past autumn: Drs. Paul Starr, A. R. Elliott, F. J. Dyas, John A. Cavanaugh, Weller Van Hook, I. M. Levin and Dr. Frank Smithies, all of Chicago; Dr. W. H. Wilson of Joliet and Dr. Roswell T. Pettit of Ottawa.

GEO. H. WOODRUFF, M. D.,  
Secretary.

### Marriages

MAX M. COOPERSMITH to Miss Bess Connell, both of Chicago, Nov. 1, 1926.

WILLIAM SCHLAFLY MCGINNIS, Alton, to Miss Marguerite Blong Kennedy of St. Louis, October 14.

OTTO CHARLES PINC to Miss Ann Greenwald, both of Chicago, in June.

### Personals

Dr. Otto L. Schmidt has been appointed a member of the board of education of Chicago.

Dr. Harry A. Singer recently resigned as clini-



cal associate in the department of medicine, Rush Medical College.

Dr. Howard A. Orvis, Grass Lake, Mich., has been appointed full-time health officer of Winnetka, effective Jan. 2, 1927.

The staff of the Norwegian Deaconess Hospital gave a testimonial dinner recently in honor of Dr. Elmer E. Henderson.

Dr. Thomas D. Allen has been appointed to a traveling fellowship in Rush Medical College for six months from September 1.

Dr. Alice McNeal has been appointed anesthesiologist in the department of surgery, Rush Medical College, for four years from July 1.

Dr. Ernst Pribram was appointed assistant professor in the department of pathology, Rush Medical College, for one year from October 1.

Dr. Chester S. Keefer has been appointed resident physician in the Medical Clinic of the Billings Hospital, and instructor in medicine for two years from September 1.

Dr. Franklin C. McLean was appointed vice chairman of the faculty of the Graduate School of Medicine and of the Ogden Graduate School of Science for one year from July 1.

Drs. Karl A. Meyer and Raymond W. McNealy have been appointed associate professors of surgery, it is reported, at the Northwestern University Medical School.

Dr. Morris Fishbein gave the second lecture in the medicohistorical series at the University of Illinois College of Medicine, December 1, on "Growth of Medical Ethics."

Dr. James B. Herrick retired recently as clinical professor and chairman of the department of medicine, Rush Medical College, and was appointed professor emeritus.

Dr. William Allen Pusey addressed the Medical-Historical Club at the University of Illinois College of Medicine, December 15, on "Some Great Doctors of the Backwoods."

Dr. Herman N. Bundesen, city commissioner of health, was appointed professorial lecturer on public health administration in the department of hygiene and bacteriology at the University of Chicago for one year from October 1.

Esmond R. Long, Ph. D., addressed the Chicago Neurological Society, December 16, on "Ad-

enoma of the Hypophysis Without Acromegaly or Visual Disturbances, Terminating in Sudden Death."

Dr. Lewis J. Pollock, Chicago, has been appointed professor of neurology and psychiatry and head of the department at Northwestern University Medical School.

Dr. Jonas Curtis Lyter, St. Louis, will address the Waterloo Medical Society, Waterloo, January 19, on "Some Aspects of Cardiovascular Mechanisms in Chronic Pulmonary Emphysema."

Dr. Aaron H. Smith of the Niagara County Sanatorium, Lockport, N. Y., has been appointed superintendent of the Livingston County Tuberculosis Sanatorium to succeed Dr. F. Herbert Bartlett, resigned; Dr. Smith formerly practiced at Ransom.

Dr. Frank C. Sibley, Carmi, has been elected president of the Southern Illinois Medical Association, and Dr. William J. Benner, Anna, secretary-treasurer; the next annual meeting will be at Murphysboro.

Drs. Fred H. Gunn and Michael Earl Brennan, both of East St. Louis, addressed the Jackson County Medical Society, December 14, on "Peculiar Phase of Appendicitis" and "Lead Poisoning," respectively.

Dr. Ernst Pribram gave a demonstration before the Chicago Pathological Society, December 13, at the John Crerar Library, of "Anteromedian Mero-Acrania (Nosencephalos) with Hypogastroschisis Dextra and Malformation of the Fingers and Toes."

Dr. Edward P. Troy, Chicago, has been appointed superintendent of dispensary service for the Chicago Municipal Tuberculosis Sanitarium. For the last five years, Dr. Troy has been in charge of the Robey Street dispensary, and in his new position will succeed Dr. Clarence L. Wheaton, who recently resigned.

Dr. Joseph C. Bloodgood, Professor of Clinical Surgery at Johns Hopkins will speak in East St. Louis, January 7, 1927 at 8 p. m. Subject, "Cancer Control." This is under the auspices of the St. Clair County Medical Society. The Chamber of Commerce, the various noon-day Luncheon Clubs, the schools and churches have been invited to attend and they are co-operating in making this gathering a success.

Dr. B. V. McClanahan of Galesburg, Illinois,

spoke on the subject, "The Child and the Community" before the Monmouth Kiwanis Club, December 15. This is the second of Dr. McClanahan's talks on this subject for the Lay Educational Committee of the Illinois Medical Society, the first being given before the Galva Women's Club in October.

Dr. Vila Coro has been elected Director of the Laboratory of the Chicago Eye, Ear, Nose and Throat College and is on active duty in that position. He was for seven years assistant to Dr. Barraquer in Ophthalmology, University of Barcelona, Spain, and for the past three years, Professor of Ophthalmology, University of Barcelona, Spain.

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### News Notes

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—The surgical department gave the program at the regular monthly clinical meeting, December 16, at the Cook County Hospital.

—The Chicago Society of Internal Medicine met jointly with the Illinois Division of the Society of Experimental Biology and Medicine, City Club, December 20.

—The Chicago Tuberculosis Society was addressed by Dr. Ralph C. Matson, Portland, Ore., December 17, Brevoort Hotel, on "Operative Collapse in the Treatment of Pulmonary Tuberculosis."

—The Illinois Society of Mental Hygiene met at the City Club, December 14; among others, Dr. Smiley Blanton, director, child guidance clinic, Minneapolis, spoke on "Speech and the Emotional Life."

—The Chicago Ophthalmological Society met at the Hotel Sherman, December 30, with a fellowship dinner at 6:30, presentation of clinical cases at 7, and a scientific program at 8 o'clock; among others, Dr. Cassius D. Wescott spoke on "Accommodation as It Concerns Us in Routine Refraction Work"; Dr. Robert Vonder Heydt exhibited lantern slides of illustrations and an original copy of "Augendienst," one of the first complete works on the eye.

—The clinical meeting of the Chicago Surgical Society was held at Cook County Hospital, December 3. The scientific program was presented following dinner at the University Club in the evening. Among others, Dr. Edwin M. Miller

discussed "Chronic Duodenal Ileus," and Dr. Golder L. McWhorter, "Changes in the Liver and Gallbladder of Animals Following Experimental Use of Sodium Tetrabrom and Tetraiodophenolphthalein."

—E. H. Lewinski-Corwin, Ph. D., New York, was the guest of the Institute of Medicine at the eleventh annual meeting, City Club, December 7; the subject of his address was "Community Service as Developed by the New York Academy of Medicine." Dr. Anton J. Carlson, University of Chicago, delivered his presidential address on "The Institute of Medicine, Past and Future." The third Ludvig Hektoen lecture of the Billings Foundation will be delivered at the City Club, January 28, by Miss Maud Sly, member of the Otho S. A. Sprague Memorial Institute, University of Chicago, on "Studies in the Nature and Inheritability of Cancer."

—The Department of Public Health of Illinois has notified practicing physicians of the state where they may obtain diphtheria toxin-antitoxin without charge, and at the expense of the state. The notice includes a list of these so-called state antitoxin agents, at least one being in each county seat, and a number of municipalities have them. These agencies keep a supply of toxin-antitoxin on hand, as well as such other material as typhoid vaccine, silver nitrate solution and diphtheria antitoxin. At present, several lay organizations are assisting in a state-wide educational program in the use of toxin-antitoxin, and they are seeking the endorsement and support of physicians.

The University of Chicago announces a gift of \$415,000 from George H. Jones, director of the Inland Steel Company, for the construction and endowment of a chemical research laboratory, which will be the first unit of the new laboratories to be devoted to research in chemistry and its relation to medicine and industry. The laboratory, named in honor of the donor, will have an important bearing on the \$20,000,000 medical program which the university has undertaken to provide. It will be characterized by small private rooms for research where elaborate instruments can be used without disturbance, and will permit research in such fields, not now extensively cultivated at the university, as colloid chemistry, synthetic organic chemistry and photosynthesis. When the new buildings are



finished, Kent Laboratory will be used wholly for undergraduate work.

—There had been 1,100 cases of smallpox reported to the Illinois Department of Public Health this year up to November 30; smallpox was then less prevalent than it had been for years at the same season; there were only five cases reported during October, and about twenty in November. The director states, however, that outbreaks frequently begin in December; every year in December a number of communities must decide whether to vaccinate or have smallpox in their midst. During 1925, there were 1,625 cases reported, and in 1,274 of them there had never been a successful vaccination; the remaining patients had either been vaccinated more than seven years previously or gave no definite history of vaccination at all. That Chicago is well vaccinated is indicated by the fact that only 1,500 of more than 30,000 cases reported in Illinois in the last eight years occurred in Chicago; only seventy of those were reported during 1925.

## Deaths

LOUIS H. CLAMPT, Jacksonville, Ill.; Hospital College of Medicine, Louisville, 1884; aged 66; died, November 2, of chronic nephritis.

ARTHUR J. CLAY, Hoopeston, Ill.; St. Louis University School of Medicine, 1906; member of the Illinois State Medical Society; for many years health officer of Hoopeston; aged 49; died, November 11, of acute dilatation of the heart.

JABAS FENIMORE COOPER, Peoria, Ill.; College of Physicians and Surgeons, Indianapolis, 1896; member of the Illinois State Medical Society; aged 73; died, October 23.

DAVID COTTRELL, Chicago; Rush Medical College, Chicago, 1897; aged 59; died suddenly, November 11, of heart disease.

OTTO M. DE KIEFFER, Chicago; Jenner Medical College, Chicago, 1908; a Fellow, A. M. A.; aged 60; died, October 30, of myocarditis.

ISAAC ABRAM FOSTER, Zeigler, Ill.; St. Louis College of Physicians and Surgeons, 1891; a Fellow, A. M. A.; aged 64; died, December 1, of duodenal ulcer and peritonitis.

ALBERT EDWARD HALSTEAD, Chicago; Chicago Medical College, 1890; a Fellow, A. M. A.; professor of anatomy and head of the department, 1898-1901, and professor of surgery, 1901-1907, Northwestern University Medical School; for many years attending surgeon at Cook County Hospital; since 1912 professor of surgery, University of Illinois College of Medicine;

member of International Surgical Association, the American Surgical Association and the Western Surgical Association; went to France during the World War with Base Hospital No. 53, and later served as chief surgeon at Hospital Center No. 68 at Le Mans; author of chapters on brain surgery in various surgical works and numerous other treatises on that subject; president of the medical board, 1913-1917, and since 1901 attending senior surgeon, St. Luke's Hospital, where he died, December 6, of coronary thrombosis, aged 58.

FRANK HOWARD LORD, Plano, Ill.; Rush Medical College, Chicago, 1874; a Fellow, A. M. A.; president of the First Bank of Plano; for eight years county coroner and for forty years member of the school board; aged 74; died, December 4, of pyelonephritis.

E. JOSEPH McENTIRE, Erie, Ill.; Rush Medical College, Chicago, 1895; aged 52; died, November 24, of cerebral hemorrhage.

BELLE B. MURPHY, Chicago; Jenner Medical College, 1910; aged 55; died, November 7, of lobar pneumonia.

IRA O. PAUL, Rockford, Ill.; College of Physicians and Surgeons, Chicago, 1885; aged 66; died, November 17, of heart disease.

EMMETT P. POINDEXTER, Greenville, Ill.; Missouri Medical College, St. Louis, 1874; Confederate veteran; aged 88; died, Nov. 16, 1926, of chronic myocarditis.

EDWARD N. REDDEN, Chicago; Illinois Medical College, Chicago, 1909; a Fellow, A. M. A.; formerly professor of surgery, Loyola University School of Medicine; at one time on the staff of St. Elizabeth's Hospital; aged 47; died, May 19, of myocarditis.

CHARLES B. SAUNDERS, Chicago; National Medical University, Chicago, 1886; a Fellow, A. M. A.; Harvey Medical College, Chicago, 1897; Dunham Medical College, Chicago, 1899; aged 61; died, November 9, of chronic nephritis and myocarditis.

FRANK LAWRENCE TALCOTT, Joliet, Ill.; University of Vermont College of Medicine Burlington, 1885; aged 64; died, Nov. 30, 1926, at St. Joseph's Hospital, of abscess of the liver.

BUFORD TAYLOR, Westville, Ill.; Medical College of Indiana, Indianapolis, 1885; a Fellow, A. M. A.; formerly county coroner; aged 64; died, Nov. 30, 1926, of heart disease.

HARLAN E. TRASK, Chicago; Central College of Physicians and Surgeons, Indianapolis, 1896; member of the Illinois State Medical Society; aged 57; died, July 2, of carcinoma.

SPENCER C. WERNHAM, Marengo, Ill.; Rush Medical College, Chicago, 1874; aged 80; died, November 24, at St. Joseph's Hospital, Elgin, of lobar pneumonia.

JOHN A. WESENER, Chicago; College of Physicians and Surgeons, Chicago, 1894; a Fellow, A. M. A.; formerly professor of chemistry at the University of Illinois College of Medicine, Chicago; president of the Columbus Laboratories; aged 61; died, November 18, of cerebral hemorrhage.



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# Illinois Medical Journal

OWNED AND PUBLISHED BY THE MEDICAL PROFESSION OF ILLINOIS

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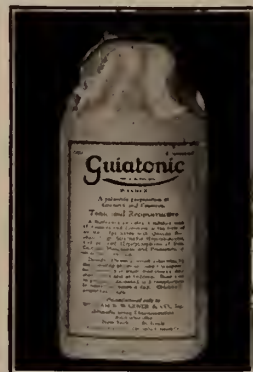
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# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF  
THE ILLINOIS STATE MEDICAL SOCIETY

VOL. LI

OAK PARK, ILL., FEBRUARY, 1927

No. 2

## ILLINOIS MEDICAL JOURNAL

Published monthly by the Illinois State Medical Society under the direction of the Publication Committee of the Council.

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State Society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

Send original articles and all communications relating to advertisements to Dr. Charles J. Whalen, Editor, 6221 Kenmore Avenue, Chicago.

Membership correspondence to Dr. Harold M. Camp, Monmouth, Ill.

Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 1618 Juneway Terrace, Chicago.

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## Editorial

### DOCTORS DESIRING TO READ PAPERS AT THE STATE MEETING QUALIFY AT ONCE

Members of the Society who are interested in presenting papers before any of the sections at Moline, May 31, June 1, 2, 1927, are requested to write to either the chairman or the secretary of the section in which he is interested, giving the title of the paper and the full address of the author.

It is customary to divide the papers in each section equally between members of the Chicago Medical Society, and the Downstate Societies.

The Committee on Arrangements at Moline has just reported that all sections will meet in the same building, the same that will house the exhibits, registration and information headquarters.

This arrangement will add materially to the interest of the meeting and all efforts are being made to have an unusually large attendance for the 77th annual meeting.

### SECTION OFFICERS

#### Section on Medicine:

Leroy H. Sloan, chairman, 1180 East 63rd Street, Chicago.

J. L. Sherrick, Secretary, Monmouth.

#### Section on Surgery:

E. P. Coleman, chairman, Canton.

J. R. Harger, secretary, 25 East Washington Street, Chicago.

#### Section on Eye, Ear, Nose and Throat:

Louis Ostrom, chairman, Rock Island.

C. F. Yerger, secretary, 4100 West Madison Street, Chicago.

#### Section on Public Health and Hygiene:

H. V. Gould, chairman, 1214 Berwyn Avenue, Chicago.

A. A. Crooks, secretary, Peoria.

#### Section on Roentgenology:



E. S. Blaine, chairman, 5 South Wabash Avenue, Chicago.

Harold Swanberg, secretary, Quincy.

It is requested that the Chicago Medical Society members write to the Chicago officers, and the Downstate men get in touch with the other members so that there will be no confusion, and the programs can be arranged in such a manner that the 1927 annual meeting will be one long remembered.

The officers of the five sections of the Illinois State Medical Society are anxious to arrange their respective programs as early as possible. The programs next year will be conducted somewhat differently from those of former years, and should make the meeting more attractive than ever before.

### MAKE HOTEL RESERVATIONS EARLY ILLINOIS STATE MEDICAL SOCIETY ANNOUNCEMENTS.

The seventy-seventh annual meeting of the Illinois State Medical Society will be held in Moline, May 31, June 1-2, 1927. In anticipation of one of the largest and best meetings in the history of the society, the committees on arrangements have inaugurated extensive preparations for the meeting and entertainment of the Society.

The committee on hotel accommodations urge that reservations for the meetings be made early.

The hotels have agreed that reservations may be made directly through our Hotel Committee. Those wishing to make reservations will please address Dr. G. D. Hauberg, chairman, Hotel Committee, Moline, Ill., stating hotel preference, etc.

Below will be found a list of the principal hotels in Moline, Rock Island and Davenport:

#### MOLINE HOTELS

##### *Leclaire Hotel:*

200 rooms and 70 apartments. Can accommodate about 400 persons.

##### Rates—

\$3.00 for a single room with tub and shower bath.

\$4.50 for a double room with tub and shower bath.

\$5.50 for a room with twin beds for two persons.

\$8.00 for a room with twin beds for four persons.

\$2.50 for a bed in an apartment.

##### *Campbell Hotel:*

Can accommodate about 25 persons.

##### Rates—

\$2.00 for room with bath (single).

\$3.00 for room with bath (double).



LeClair Hotel, Moline, Ill.

\$1.50 for room without bath (single).

\$2.50 for room without bath (double).

\$1.25 for room with single bed.

\$1.00 each for rooms with two full beds, four in room.

All rooms have hot and cold water, shaving mirror, etc.

##### *Hotel Mayfair:*

\$1.50 per person, 2 in room, without bath.

\$2.00 per person, 2 in room, with bath.

\$1.00 for double room.



Fort Armstrong Hotel, Rock Island, Ill.

#### ROCK ISLAND

##### *Hotel Fort Armstrong:*

80 rooms. Can accommodate 160 persons.

##### Rates—

\$2.25, \$2.50, \$3.00, \$3.50, \$4.00.

\$2.00 per person extra.

*New Harper Hotel:*

75 rooms available.

## Rates—

- \$2.00 to \$2.50 for single room with bath.
- \$1.50 for single room without bath.
- \$4.00 to \$4.50 for double room with bath.
- \$2.50 to \$3.00 for double room without bath.

*Como Hotel:*

50 rooms available.

## Rates—

- \$1.75 to \$2.50 for single room with bath.
- \$1.00 to \$1.75 for single room without bath.
- \$2.75 to \$4.00 for double room with bath.
- \$2.00 to \$2.50 for double room without bath.

*Hotel Harms:*

25 rooms available.

## Rates—

- \$1.50 for single room without bath.
- \$2.00 to \$2.50 for single room with bath.
- \$3.50 to \$4.50 for double rooms.

All outside rooms; running hot and cold water.

Rock Island, 10 minutes by auto from convention headquarters; 20 minutes by street car.

## DAVENPORT HOTELS

*Hotel Blackhawk:*

About 100 rooms available.

## Rates—

- Rooms with lavatory and toilet, \$3.50 and \$4.00 per day.
- Rooms with shower bath, \$4.00 and \$4.50 per day.
- Rooms with tub bath, \$5.00, \$5.50, \$6.00 and \$7.00.

The above rates are for two people in a room.

Davenport 15 minutes by auto and 40 minutes by street car.

THE NURSING PROFESSION SHOULD  
TAKE HEED BEFORE THE "GOOSE  
THAT LAYS THE GOLDEN EGGS"  
MEETS AN UNTIMELY DEATH

\* To Yale University, pioneer in education in this country, must be given a fresh laurel. This university has a school to train nurses.

From this school it seems as if relief might be expected in the nursing system that has become so well nigh impossible for either practitioner or patient to handle. The over-trained nurse has long been a thorn in the side of self-respecting physicians, and the overpaid and

underworked nurse is beyond the reach of the great bulk of citizens.

This school may be the wedge with which the present nursing problem may be brought to some sort of compatible balance with existing circumstances as to sick persons, incomes, duties and hire.

Only too often does a doctor meet with the need of a nurse to which the retort courteous from his patient, is like the housewife who, quoting from the *Boston Medical and Surgical Journal* remarked, "But I can't have a nurse, doctor, I'M too sick to look after her."

Only too true is the fact that in many instances the trained nurse has come to regard personal service for her patient as beneath her dignity and below her personal standing. High standards set for nurse-students has had something to do with this. Not all responsibility can be laid there, nor can any one excuse the American spirit of progress and desire for a safeguarded old age, for making of the nursing profession what is really a cutthroat job where the patient is concerned.

Rapidly the high cost of elaborate training is limiting trained nursing to wealthy private patients, in their homes, and to institutions for the sick and convalescent. In fact the entire trend of the overtrained nurse is institutional. If an executive position is possible, so much the better. The personal love of individual care of the sick seems to have gone out in a horse and buggy.

Some middle road must be found for those whose educational qualifications while not admitting of their securing the executive or specialized positions open to the nursing profession, yet after good training will be capable of caring for sick persons under doctor's orders, and who will be willing and contented to do so.

Of this class there are hundreds and hundreds and thousands of willing girls and women. Coming under the classification "Who gives himself with his gift feeds three, Himself and the humble beggar and Me," their work will be the plain and requisite care of the sick.

It begins to look as if the Yale School for Nurses were going to be the lifeline. True the tendency of this school is to abolish the apprentice system and to teach nursing in the way that



pioneer medicine was taught—mostly by books and by lectures. The Massachusetts General hospital and the Childrens' Hospital co-operate with Simmons college in an arrangement that may be of service elsewhere. For those who desire public health nursing, or specialized types of institutional work a five-year course is given. It has been suggested that by concentration on a practical nursing course of three years or less, and on the theoretical aspects in the lengthier course that perhaps the way would be made clear to fill the need for nurses in the home, in the hospitals and in the welfare agencies and research bureaus and laboratories.

Leaders in the nursing profession should take heed before the "goose that lays the golden eggs" meets an untimely death. Conditions are intolerable in the way of having some one take care of those who are ill at a price that the sick can pay, instead of at the present prohibitive rate in Illinois and in many other states. The school at Yale University is vivid writing on the wall. What this institution has done, others are going to do. Being affiliated with an institution of the high standard of Yale University will leave the nurses trained there free from the criticism attaching to the "mail-order nurse."

And here is where public opinion and the bulk of the medical profession will stand to the last ditch by capable, willing, careful women who are not afraid to do what a plain nurse ought to do. Americans have a mania for organizing and often organization out does itself. This would seem to be about what has happened with the nursing profession. Keeping up the standard is an excellent motto, both by current members of an organization or by fresh applicants. But when an article becomes beyond the reach of those whom it is destined to serve then it is time to reconstruct. When the automobile was a rich man's toy,—as figuratively speaking the trained nurse is today, when it costs upwards of \$100 weekly for an all time nurse—two women working at \$50 each—it was a machine to be regarded with awe and wonder and envy, but not purchase. Along came Henry Ford and put a serviceable automobile on the market at a price within the income of almost the entire American citizenry. The comparison is too obvious to need comment.

## THE TRAINED NURSE PROBLEM

Immediate steps must be taken to clear up the nursing situation so that efficient care in illness may be available for persons who are neither plutocrats nor paupers.

As matters stand now plutocrats can afford to hire trained nurses who are the most luxurious of appurtenances in a sick room. Paupers seek public institutions where at the expense of the tax-payers nursing service can be secured.

It is unbelievable the extent to which the trained nurse has pushed her advantage in every conceivable fashion. There is no monopoly existing that has the public more securely by the throat.

Raising the standard of entrance requirements has made the trained nurse an almost priceless gem. Twelve hours per diem is the maximum for which a trained nurse will stay in the house with a patient and fifty dollars a week the minimum hire. In addition she must be fed, lodged and to a certain extent waited upon. Especially in cities is the lodging question a matter of moment. Housing space is at a premium and food no small item.

Where nursing attendance is considered, the average citizen, the bulk of the taxpaying body, is to be colloquial "Up a tree." Neither in a hospital nor in his home can he afford this necessary adjunct to convalescence for more than two weeks.

The doctor is a mere collector of pittances in his fees by comparison with the trained nurse. A great deal of the doctor's service is purely philanthropic, and few physicians worthy of the name know the meaning of "hours" except as a continuity.

Out of the twelve hours service that a trained nurse consents to give often she must have her two hours "relief." Rarely, especially when she is on private cases does she have more than four and on an average about two hours a day when she has to work.

There was never anything to compare with this in the world. Weighed in the same scales public utilities are generous benefactors, and the whole scheme is enough to make Florence Nightingale turn in her grave.

The *Journal of the A. M. A.* discussing this

subject in a recent editorial remarked "A report published in the *Chicago News* indicates that the Illinois State Association of Nurses, first district, has just put into effect a new policy under which its members are refusing to accept twenty-four hour duty when called on as private nurses by patients in public hospitals. The demand means that a person requiring continuous attendance must employ two nurses where formerly he paid only one. For at least five years there has been increasing uneasiness among the medical profession and the public over the changing attitude of the nurse toward her vocation and her labor. What was formerly distinctly an auxiliary in the care of the sick has been split into a dozen professions and specialties and with increasing attention to management and decreasing attention to individual service. . . .

Too few nurses who enter training school have their thoughts focused on the idea of personal service to ailing humanity.

Rather it would seem they are stimulated to the securing a dignified position in some specialty. Obviously by this development, the care of the individual sick person has suffered. The possible lack of this care is responsible for the unrest that pervades medical and lay circles in the matter of nursing. At the last annual session of the A. M. A., the house of delegates particularly requested the board of trustees to look into the nursing situation and to appoint a special committee for the purpose. Granted that there are needs for such highly specialized nursing administration as has been mentioned, the needs of the individual sick are the primary ones. Apparently nurses are being trained in technical matters to a point at which dignity suffers when they are asked to undergo the tribulations of personal service. The modification of curriculums should tend to the development of more nurses who will consider the care of the sick their highest ideal."

#### COLLECTING DOCTORS' ACCOUNTS

Under date of November 7, 1925, the *Journal of the American Medical Association*, on page 30, made the following comment:

"Those outstanding accounts may be partly or wholly convertible into cash. Doctor, if you

can refer to The Medical Credit Association. Accounts are handled especially for physicians with courtesy and promptness."

#### SCIENTIFIC SERVICE COMMITTEE REPORTS PROGRESS

Since the last issue of the ILLINOIS MEDICAL JOURNAL its Scientific Committee reports progress as follows:

On Friday, January 14, Drs. Heinemeyer of Rockford, D. D. Smith of Decatur, W. C. Danforth of Evanston and David S. Hillis of Chicago met with the Chairman to discuss the work in obstetrics. Dr. N. Sproat Heaney was unable to be present but sent a letter outlining his views. This seemed to coincide with the opinion of the men present and was accepted as the basis for this work. An outline of subjects will be prepared by these men and forwarded to county secretaries within a short time.

Dr. Carl A. Hedblom, Professor of Surgery, University of Illinois, College of Medicine, has compiled a list of subjects and has a number of men from that institution that are willing to co-operate with this committee in its work with county medical societies. This list will be completed within a short time.

Dr. James G. Carr of Chicago and S. E. Munson of Springfield will give a clinic on cardio-vascular disease before the DeWitt County Medical Society at Clinton, February 11.

Dr. John B. Moore of Benton talked on "Fractures" before the Union County Medical Society at Anna, January 13.

Dr. Emmet Keating of Chicago addressed the Franklin County Medical Society at Benton, January 27. His subject was "Periodic Health Examinations." That this is a live subject with that society was evidenced by their large attendance.

The dentists are meeting with the Union County Society on February 10 to discuss "Focal Infections and Their Relation to Systemic Disease." Dr. Lewis W. Schultz will address the meeting. Dr. Schultz comes from the faculty of the U. of I. College of Medicine and is one of the speakers bureau referred to above.

JAMES H. HUTTON,  
Chairman.



## FELLOWSHIPS IN PSYCHIATRY.

January 6, 1927.

Fellowships for training in extramural psychiatry are again available to a limited number of qualified applicants, announces the National Committee for Mental Hygiene, in a recent statement. These fellowships are made possible by a renewal, from the Rockefeller Foundation, for a second period of three years, of its appropriation of \$40,000 to the National Committee for Mental Hygiene which administers the fund and directs the training of fellows.

These fellowships are designed to provide special training for physicians who have had previous hospital training in psychiatry but who wish to prepare themselves for extramural work in child guidance, delinquency, education, dependency and industry.

Fellowships are open to physicians under thirty-five years of age, who are graduates of Grade A medical schools and have had at least one year of training in a hospital for mental disease, maintaining satisfactory standards of clinical work and instruction. A longer period of mental hospital training is desirable.

A different type of fellowship is also available for the training of social workers in psychiatric social work. Applicants for fellowships in psychiatric social work must hold a collegiate degree, be under thirty years of age and be free to devote themselves to a period of professional work upon completion of their training.

Applications for either type of fellowship are now being received at the National Committee for Mental Hygiene. Blanks for this purpose may be obtained by addressing Dr. Frankwood E. Williams, 370 Seventh Avenue, New York City.

---

## TO THE MEMBERS OF THE FIFTY-FIFTH GENERAL ASSEMBLY ADDRESSED.

### ILLINOIS STATE MEDICAL SOCIETY LEGISLATIVE COMMITTEE.

Among the many problems that you will be called upon to decide in the next legislature are those which pertain to the public health.

In each session of the legislature, for a great many years, there have been groups of drugless healers who attempt to gain recognition by special laws to favor their particular branch of the

healing art. The fifty-third general assembly devoted a great deal of time to this perplexing problem, and, after a thorough deliberation, a special committee in the house and senate drew up a measure which passed by a large majority, in fact, in the senate there was a negative vote, and in the house it carried by a big majority.

The bill was attacked by two different drugless groups, the chiropractors and the naprapaths. The cases went to the supreme court and in both instances the court held the act valid and declared it was a safeguard to the public health, and that the minimum requirements were not too severe.

The administrative code of the state makes provisions for the drugless healers to have proper representation on the board of medical examiners. There is now attached to the board a licensed osteopath and a licensed chiropractor, who examine the applicants. Properly qualified chiropractors are appearing before the board at each of the examinations and many of them have passed and have been duly licensed.

The National School of Chiropractic in Chicago, the largest school in Illinois, teaching that particular branch of the healing art, has complied with the requirements in the law and is in good standing, and its graduates are appearing before the board of examiners and those successful in passing the examination are being licensed.

The Palmer School of Chiropractic, located at Davenport, Iowa, refuses to bring their curriculum up to the requirements of the Illinois law. The head of that school refuses to admit that a high school education is necessary before a college course, and also gives a course of instruction in his professional school very much less than the requirements of the Medical Practice Act, which have been held necessary by the supreme court of this state on two occasions. These facts can be verified by the director of registration and education at Springfield.

The records of the department of education and registration disclose the fact that among the seventeen or eighteen hundred drugless healers licensed in the state of Illinois there are practitioners of osteopathy, chiropractic, naprapathy, vitapathy, neuropathy, hydrotherapy, mechanotherapy, physcultopathy, magnetic healing and naturopathy. Does it look reasonable that the

chiropractor should have a special law and a special board when the other drugless healers are not permitted to have a like privilege? Even if a separate board was provided for the above ten groups this would only be a beginning because there are nearly thirty well defined groups of drugless healers all with different names and with different ideas of treatment. As fast as a new group would come into Illinois and seek a special board it would be only consistent to grant it.

The Medical Practice Act of Illinois does not discriminate against any method of healing. It does not take into account the question of treatment or healing at all. It simply says that no man shall assume the grave responsibility of caring for the sick until he is familiar with the human body in health and in disease, and knows its structure and its functions. Every man who undertakes to practice the healing art is presumed to know something about the anatomy (structure of the human body), physiology (functions of the body), the chemical compositions of the body fluids and tissues, bacteriology (the study of the small living organisms with which we are constantly in contact) and hygiene (the laws of sanitation and right living). The state assumes that without such fundamental knowledge, which is claimed in common by all so-called schools, no man should be allowed to assume the responsibility of caring for the sick. When a man has such knowledge he should be and is allowed under the state law to use any plan or system of healing that his judgment and conscience may dictate. The Illinois law makes one common standard for all who would treat the sick. No such thing as systems or schools of medicine or methods of healing are recognized.

What the chiropractor wants to do is to set up his own standards. He wants to disregard the fundamentals common to all schools and systems. He wants to reverse the state's attitude on the question of treatment, by adopting the plan of securing state recognition in the matter of treatment alone.

Treatment is a matter of opinion and follows as a natural sequence on knowledge of what it is proposed to treat. Men have always differed on the subject of treatment. It will never be

possible to establish by law any system of treatment or to favor any school of medicine representing a special or exclusive "cure-all" plan of treatment. It is possible to establish minimum requirements in general education and in knowledge of the fundamentals common to all schools.

No man ignorant of common standards accepted by all schools should be allowed to even give advice to sick people or to treat anything. It is manifestly impossible to give good advice on a subject about which he knows nothing and it is manifestly impossible for him to separate cases which he proposes to treat from the case he does not propose to treat. The only fault the chiropractor can find with the Medical Practice Act is that the law requires him to have a general education, and then pass an examination on such branches as anatomy, physiology, chemistry, bacteriology and hygiene. There never has been and never will be an allopathic anatomy, a homopathic physiology, and eclectic chemistry, and osteopathic bacteriology or a physio-medical hygiene. Such would be as absurd as a baptist algebra, a methodist geography or a presbyterian grammar.

The question that the legislator must necessarily decide is not one favoring medical men, chiropractors or any other group but the big question as to protecting the public's health against men incompetent to diagnose disease. It is just as important to know what not to do as it is to treat any disease condition. It is probably to be admitted that the chiropractor does no particular harm on cases that are not of a serious nature but the efficacy of his therapy is not the debatable question at this time. It is merely one of minimum education and the Medical Practice Act of 1923 which has been upheld as being constitutional by the supreme court of Illinois, certainly has the most liberal requirements for the drugless healer and for the chiropractors. For the chiropractor to claim that only chiropractors are qualified to examine their applicants in anatomy, physiology, etc., is an insult to the intelligence of the members of the general assembly. Treatment may differ but the human body does not and the mere coining of euphonious names to certain anatomical parts does not change the basic understanding of the human body.



We sincerely trust that you will give this interesting subject careful consideration before pledging your vote for or against any proposed legislation relative to the public health.

JOHN R. NEAL,

Chairman Legislative Committee,  
Illinois State Medical Society.

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SPIES SWARM OVER THE LAND LIKE  
THE LICE OF EGYPT, DEVOURING  
THE SUBSTANCE OF THE PEOPLE,  
PRYING INTO THEIR PRIVATE  
AFFAIRS, REGULATING THEIR  
TRADE AND BUSINESS

We have repeatedly in the Journal called attention to the present trend of the times for congress and state legislators to tell physicians how, when and under what circumstances they shall treat the sick, even attempting to regulate the remedies and dosage that doctors are permitted to prescribe.

We have stated times without number that there are too many laws and too little respect for those we have. This fact is becoming recognized generally by our statesmen and thinking people. In this connection it is wholesome to read the comments of Senator James Reed of Missouri in his address before the National Boot & Shoe Manufacturers' Association January 20th. We quote:

"The return to the states of 'their natural and just authority' so as to bring the federal government 'back to its original simplicity'," is urged by Senator Reed.

PURGE NATION OF PLAGUE OF SPIES. GET THE  
UNITED STATES BACK TO CONSTITUTION

Pleading for the elimination of "hordes of officials, tax gatherers, snoopers, and spies," who "swarm over the land like the lice of Egypt, devouring the substance of the people," Senator Reed (Dem., Mo.) tonight advocated a determined reversion to the constitutional principles of federated government and the re-establishment of human liberty as the high aim of political activity.

Further, the Senator said the difficulties of government would be greatly simplified "if we could always keep in mind that each human being is endowed by his Creator with the absolute

right to live his own life, choose his own occupation, select his own habitation, eat and drink whatsoever he chooses, and, above everything else, to think as his brain dictates, to fully express his opinions, to adopt his own creed, and worship according to his own conscience, without fear or restraint, without proscription, either social or political."

To that principle should be added another—that the sole business of government is the protection of these rights—Mr. Reed declared, adding:

"Such was the doctrine of the fathers of the republic.

"How have we kept the faith?

"With congress desiring to have its will, regardless of the constitution, and with the courts indulging the presumption that congress was defending the constitution, the charter of our liberties was ground as between two millstones.

"A saturnalia of federal law making began. Every legislature followed suit. When the first heat of the race was over and the legislative lords paused to take breath, the old maxim, 'that people is governed best which is governed least,' had been buried under a mass of statutes which sought to control, regulate, or coerce almost every activity of man.

"To enforce these innumerable laws, regulations and rules, a horde of officials, tax gatherers, snoopers, and spies swarm over the land like the lice of Egypt, devouring the substance of the people, prying into their private affairs, regulating their trade and business, and then poisoning their supply of alcohol.

A SWORD OF OPPRESSION

"What wonder that the average man has come to regard the law as a sword of oppression, rather than a shield of protection?

"Is not the crying need of the hour the disbandment of useless boards, the repeal of unnecessary laws, the return to the states of their natural and just authority, to the end that we may bring the federal government back to its original simplicity?"

Senator Reed reiterated his hostility to the league of nations and the world court, and declared that at the Washington arms conference the United States "surrendered the dominion of the seas then within our grasp."

## Correspondence

### LEGISLATIVE COMMITTEEMEN ATTENTION

Springfield, Ill., January 27, 1927.

*To the Legislative Committeemen:*

The 55th General Assembly is now organized, Committee appointments are being completed, and the actual work of the Assembly will soon be started.

We will follow the same plan of organization in the Illinois State Medical Society that has been successful for the last several sessions of the Legislature.

Councilors will supervise all legislative matters in their respective districts. They have devoted a great deal of time in the last two months in organizing the local committees.

Your Legislative Committee will be directed in all its activities by your Council. There are a number of districts, however, that are not complete, and it is imperative that the list of local committees reach this office within the next ten days or two weeks to be fully effective.

A Bulletin will be issued as frequently as necessity warrants, but individual matters will be taken up direct with local Committeemen. As long as bills which we oppose are in committee, obviously, it is unnecessary to call upon the entire State for help. If a bill is in the Judiciary Committee of the House, only districts from which its members come are appealed to for help, as it is quite apparent that physicians living in other Senatorial Districts have a little effect upon members in the legislature, but as a rule legislators are very anxious to confer with their own constituents, or in other words, with the ones who have the power to return them to political positions. The law-makers are home every week-end, and if the physicians will make an effort to see them personally regarding bills which we are interested in, a great amount of good may be done with very little effort. It is a well known fact that large lobbies of physicians are not effective by coming to Springfield, but of course it would be impossible for us to carry out plans of the Society without cooperation in every district at the week-ends.

More than forty bills were introduced during the last legislature, which it was necessary for us to oppose. Not a single bill became a law which was opposed by the Council of the Illinois State

Medical Society. All of the bills referred to made an effort to lower the educational requirements of those who desire to treat human ailments. As in the past, all bills of interest to medical men will be reviewed in the Bulletins, and any member interested in any particular bill may receive same without cost by writing the Chairman of the Legislative Committee at Springfield.

Yours very truly,

J. R. NEAL,  
*Chairman Legislative Committee.*

### VISUAL DEFECTS.

DEPARTMENT OF HEALTH.

CITY OF CHICAGO.

Herman N. Bundesen, M. D.,  
Commissioner of Health.  
November 24, 1926

Dr. Robert H. Buck,  
Secretary, Chicago Ophthalmological Society,  
30 North Michigan Avenue,  
Chicago, Illinois.

My dear Dr. Buck:

The Department of Health is extremely interested in the proper correction of visual defects in children, as you know. Of late we have been receiving complaints from optometrists to the effect that we are discriminating against them by advising that the use of a mydriatic is necessary to refract properly.

Will you kindly give us your opinion on this matter and reasons therefor?

Thanking you for your cooperation, I am,

Very respectfully,  
(Signed) HERMAN N. BUNDESEN.  
Commissioner of Health.

Originated by  
E. A. Schlageter, M. D.,  
Acting Chief, Bureau of Child Welfare.

THE CHICAGO OPHTHALMOLOGICAL SOCIETY.  
CHICAGO, U. S. A.

Dr. Edwin J. Gardiner, Dr. Robert H. Buck,  
President Secretary

December 4, 1926.

Dr. Herman N. Bundesen,  
Commissioner of Health.  
Chicago, Ill.

My dear Dr. Bundesen:

Replying to your letter of November 24, I am personally unqualifiedly of the opinion that proper refraction of the eyes of a child requires



the use of a cycloplegic, and that it is absolutely impossible by any other means known to the ophthalmological science.

The condition, which it is our aim to relieve, is the demand upon the ciliary muscle resulting from the necessity of holding an abnormal crystalline lens in focus. Such condition is unnatural and can be relieved by supplementing the crystalline lens with a lens of such strength that the combination of lenses will result in the focusing of parallel rays of light upon the retina without muscular effort.

It then becomes prerequisite to the determination of the additional lens strength required, that the crystalline lens be in a state of rest when the measurement is made. Obviously, this can only be done by first paralyzing the ciliary muscles.

Since the amplitude of accommodation, i. e., the muscular strength available for focusing the crystalline lens, is much greater in childhood than in maturity, this unnatural effort can largely overcome any deficiency in lens strength for a short period of time required for a manifest examination; hence the paralyzing of the ciliary muscle is imperative in childhood.

I trust this short explanation will give you a fair idea of the situation, but I will bring your letter before the Chicago Ophthalmological Society at the next meeting on December 20, with a request for action.

Thanking you for your courtesy in consulting us in this matter, I am

Yours very truly,  
(Signed) ROBERT H. BUCK,  
Secretary.

THE CHICAGO OPHTHALMOLOGICAL SOCIETY.  
CHICAGO, U. S. A.

Dr. Edwin J. Gardiner,      Dr. Robert H. Buck,  
President                              Secretary

December 22, 1926.

Dr. E. K. Findlay,  
30 N. Michigan Avenue,  
Chicago, Ill.

My dear Dr. Findlay:

At the meeting of the Chicago Ophthalmological Society on December 20, it was moved that a committee consisting of the five most recent ex-presidents be appointed to formulate an answer to the enclosed letter.

As the senior of this group, you will be the chairman, the other members being:

DR. FRANCIS LANE,  
DR. ROBERT VON DER HEYDT,  
DR. J. B. LORING,  
DR. CHARLES P. SMALL.

Yours very truly,  
Chicago, January 10, 1927.

Dr. Robert Buck, Secretary,  
Chicago Ophthalmological Society,  
30 North Michigan Avenue,  
Chicago.

Dear Doctor Buck:

In conformity with the motion from the Chicago Ophthalmological Society, your committee begs leave to submit the following unanimous report regarding the necessity of using a mydriatic or cycloplegic in the examination of the eyes of school children suffering from visual defects:

A mydriatic or cycloplegic is absolutely necessary in examining the eyes of school children suffering from visual defects. The dilatation of the pupil permits a complete inspection of the interior of the eye, and frequently a cause of poor vision can be ascertained that would be impossible in the undilated pupil. Diseases of the eye that are progressive in nature are so discovered and immediate treatment in such cases can be instituted for the protection of vision. Some general disease or infection may manifest itself at an early stage in the interior of the eye, and its early recognition may prove of vital importance to the child. Only by putting the focusing or accommodating power of the eye at rest temporarily with a cycloplegic can the proper glasses for children be determined, and by this method alone can a scientifically correct lens be prescribed.

The use of atropin or its derivatives is not only absolutely without danger to the child's eyes, but under intelligent supervision its use has proven of untold benefit in preventing blindness.

The committee desires to express its appreciation to the Chicago Commissioner of Health, Dr. Bundesen, for the opportunity of replying to the inquiry regarding the use of mydriatics, and heartily agrees with his Department as to the necessity for the careful examination of the eyes of school children.

Respectfully submitted.

(Signed) FRANCIS LANE,  
CHARLES P. SMALL,  
ROBERT VON DER HEYDT,  
J. BROWN LORING,  
EPIHRAIM K. FINDLAY,  
Chairman.

## POST GRADUATE STUDIES IN BERLIN

*International medical courses for postgraduate studies* will be held at Berlin in the months of March and April, 1927. They will be arranged by combined efforts of the Faculty of medicine of the University of Berlin, the organization of the Kaiserin Friedrich-Haus and the association of University-lecturers for medical vacation-lecturers at Berlin.

1. Course of general survey on "Progress of the entire medicine with special consideration of the latest therapeutics." (1.-12. March).

2. Course of special survey on the range "Diseases of the heart, the kidney and the vessels." (14.-23. March).

3. Course of survey on the domain "Scientific knowledge about rays." (24.-31. March).

4. Single courses on Special ranges out of all branches of medicine, partly lasting a fortnight (14.-26. March), partly lasting four weeks (1.-26. March). These courses are combined with practical laboratory work and demonstrations of patients.

5. Practical course of "Diagnostical and therapeutical technics" in the sick-rooms and laboratories of the municipal infirmary "Am Urban" (1.-14. April).

Besides these courses there will be opportunity for clinical and laboratory work in the internships of the important hospitals of Berlin, also for pathologic anatomical work. This work will be arranged for according to individual wishes by the undersigned office.

All nearer information may be obtained from  
Kaiserin Friedrich-Haus,  
Berlin NW 6, Luisenplatz 2-4.

## ACIDOSIS, TREMBLES AND MILKSICKNESS

James Fitton Couch, Bureau of Animal Industry, in *Science*, November 5, 1926, says:

During a biochemical study of the course of sickness in animals poisoned by richweed (*Eupatorium urticaefolium*, Reichard) or by the rayless goldenrod (*Aplopappus heterophyllus*, (A. Gray) Blake, formerly known as *Isocoma wrightii*, Rydb.), it was observed that excretion of acetone by the lungs and

kidneys is a constant symptom of poisoning. Some twenty-four hours after the first symptoms of trembling appear, sick animals begin to excrete large quantities of acetone. The urine becomes strongly acid and reeks of this ketone. It seldom contains albumen, and sugar was observed in two cases only. B-oxybutyric acid and acetoacetic acid have not been found in the urines examined.

## EXPERIMENTAL RESULTS

Fifteen cases were studied. Of these, five were sheep poisoned by richweed, seven were sheep poisoned by rayless goldenrod, and three were cattle, one cow and two calves, also poisoned by rayless goldenrod.

All the richweed cases excreted acetone by lungs and kidneys. A quantitative determination of the urinary acetone in one case showed the presence of 24.32 mg of acetone per 100 cc. In two cases samples of blood were also obtained, and these were positive to tests for acetone.

Of the animals poisoned by the rayless goldenrod, acetone was demonstrated in the urine of six sheep that also carried the odor of this ketone on the expired air. In one case a quantitative determination of urinary acetone showed the presence of 34.35 mg per 100 cc. The seventh case showed no symptoms of trembles and probably was not poisoned. At no time did this sheep excrete acetone nor was the urine ever acid. The urine of the three cattle was collected at autopsy and in one case we were fortunate enough to obtain a good sample of blood. All the samples contained acetone.

Blood sugar determinations were made in several cases and showed a large increase in the concentration of glucose. One animal poisoned by rayless goldenrod had a blood sugar concentration of 0.1472 gram per 100 cc; another, poisoned by richweed, had 0.1680 gram per 100 cc. The normal figures for these animals were 0.090 to 0.100 gram per 100 cc.

## SUMMARY OF FINDINGS

The findings indicate that animals poisoned by these two plants suffer from an acidosis. The fact that excretion of acetone does not begin until after the onset of the characteristic trembling—whence the common name "trembles" for the disease—suggests that the ketogenesis may be a secondary effect of the intoxication. This is supported by the fact that common remedies for acidosis do not appear to alter the course of the disease.

It is probable that the toxic principles of these two plants are excreted in the milk of lactating animals. The suckling young of animals feeding on these plants may be poisoned and exhibit the characteristic symptoms, such as trembles and acidosis. Consequently, human beings who drink milk or eat butter obtained from cows that have grazed on either of these plants are in danger of being poisoned. Cases of this sort are not rare in districts where the plants are abundant. "Milksickness," as the human disease is termed, occurs especially in the late summer and autumn at



a time when trembles in cattle and sheep is also prevalent. In human cases the odor of acetone has been constantly remarked and is considered a diagnostic symptom. Dr. W. E. Walsh, of Morris, Illinois,<sup>1</sup> *Illinois Med. J.*, n. s., 15, 422-5, 1909, diagnosed the human disease as an acidosis and recommended the use of sodium bicarbonate as a remedy. The present study supplements this diagnosis with a demonstration that acidosis is present in the cattle disease also.

### "BY THEIR FRUITS YE SHALL KNOW THEM"

The Sheppard-Towner Maternity (Birth-Control) Bill has been in operation five years and twenty major States, with a population above the average, have been carrying the burden for 28 minor, parasitic States. New York pays 25 cents of every dollar of Internal Revenue, which means about \$400,000, under this Bill for the privilege of spending \$155,444 of its own money under the direction of Miss Abbott of the Children's Bureau of the Federal Department of Labor! "Whadayamean, Labor! Parturition?" "Naw,—Unions!" Wyoming's taxpayers chip in \$8,596—and get \$18,556. Parasitic? Sure! American? Well—hardly!

That's only money waste. During the past five years of operation of that Bill, our birth rate has dropped 2.4 per 1,000 of population. That means 250,000 babies per annum who will never be American citizens. "Now, Doctor, have a heart; why blame this on the Sheppard-Towner Bill?" Well, the public health reports from Washington tell us that the State of Montana has the lowest birth rate and the highest septicemic rate in the Nation—and the Bothersome Berties and the Meddlesome Matties of the Children's Bureau have been carrying on an intensive campaign in that State for the past five years, so—"laugh that off" if you can.

We who fought the enactment of that bill foresaw all this in 1921 because, you see, we did not merely see page 60 of the Children's Bureau Publication No. 57, but we observed and studied their statistics thereon and we found that away back in the late 80's, they started that Compulsory Health Insurance with maternity aid in Germany, and, after all those years, the best they can do with 250,000 compulsorily insured women, subject to the visitations of those Meddlesome Matties with the whispered word of how to be childless though married, is a birth rate of 4.2 per cent. (parts in a hundred, mind you) while 25,000 voluntarily insured women, not subject to those visitations, show a birth rate of 42.8 per cent. (10 times);—but—the 250,000 show an abortion rate of 17.2 per cent. while the 25,000 show an abortion rate of only 2.6 per cent. (one-seventh)—and—for the enlightenment of those who are deceived by the "saving-thousands-of-mothers-through-the-beneficent-operation-of-this-Maternity-Aid" propaganda, the deaths of women, in childbirth, from "diseases complicating pregnancy": heart, lungs etc., etc., was 10.2 per cent. in the 250,000 and 10.0 per cent. in the 25,000. What price Death-Prevention: in Germany; here at home?

That Children's Bureau Publication No. 57 was written by a man named Harris of the American (?)

Association for Labor Legislation, (alias, Compulsory Health Insurance and Annual Re-Registration of Doctors); that book, "Maternity Systems in Other Countries" quotes generously and approvingly the teachings of the First Commissar of Lenin and Trotsky's Russian Soviet Department of Welfare, Mme. Alexandra Kollontai, now Soviet Minister to Mexico, and recently barred from this country by Secretary of State Kellog, not, as Senator Borah says, because he "feared for the integrity of our American Institutions, but because he revered them." And an American Congress passed that Bill! And an American Congress is now asked to perpetuate it! And the American people turn on their radios and listen to jazz and would probably whirl the dials if you or I were to begin to talk on the viciousness of this public policy of putting the financial 'prop' in Soviet propaganda for the limitation of population by Birth-Control, as voted by the League of Women Voters, recently, in hopeful anticipation of a complaisant Congress reenacting the Sheppard-Towner Maternity (Birth-Control) Act with luscious appropriations.

Where is this loss of 250,000 American babies? Not in the upper range of Society, the Intelligentsia, because there, a Pekinese Pup or a Chow Dog has long enjoyed the creature comforts which belong to His Highness, The Baby. Not in the lower order, the Proletariat, who will continue to use his women who rejoice in large families and take shame if they are childless; but—the children of that lower range, graduating into the upper range, through the broad opportunity afforded by our generous educational system, and—the Middle Range, the Bourgeoisie, itself "keeping up with the Joneses" is rapidly breaking down, through birth-control, the only bar Society has between the oppression of the Aristocracy (which France suffered) and the domination of the Proletariat (which has made Russia a "thing" among the Nations of the Earth). One does not need to be a prophet to forecast the result if the American People do not wake up: the mathematics of the 6-B Grammar Grade makes the domination of numbers spell Proletarianism.

Lord love us! How many well-educated American People will smile indulgently at this explosion and say "Pshaw! they can't do that—we would never stand for it." We said that about Prohibition and rolled over and went to sleep; when we awoke the Profession of Medicine was a joke and Bootlegging a profession and the United States Supreme Court in its "pint-per-ten-days" decision admits its helplessness to control this police power of the State which invests the rule of a Bureau with the force and effect of Statute as the Sheppard-Towner Maternity (Birth-Control) Bill did, does and will continue to do unless the People stop it.—Dr. J. J. A. O'Reilly in *Pharmaceutical Advance*.

### THE USE OF ALCOHOL IN MEDICINE

(Willcox, Charles—*Virginia Medical Monthly*, 53: 382-387, September, 1926)

The use of alcohol is as old as man and for a time was considered a potent cure-all. The presence of fusel oil in liquors has been feared as dangerous by

some, but the amount of the oil in good liquors is so small that it can be ignored from a therapeutic standpoint; for instance, one analysis of 92 liters of Cognac gave 203 grams fusel oil or about one fifth of 1 per cent. The irritating effects and disagreeable taste of freshly distilled liquors are due not to fusel oil but to some volatile substances, principally furfurol, which, after prolonged contact with the charred interior of barrels, forms esters to which is due the mellowness of old whiskey and brandy.

Alcohol is a necessity to the drug business as it is the only known agent that will extract the valuable and potent medicinal properties of the vegetable kingdom, leaving behind the inert, valueless mass. It is not only an invaluable extractor, crystallizer and solvent, but it is an ideal preservative, and is a basic agent in making ether.

Alcohol should not be prescribed as a placebo for robust young adults unless conditions are alarming; for reformed drunkards except in indicated cases; for epileptics; in cases of acute gastritis, hepatitis, or nephritis, as a rule. Alcohol should be prescribed with the judgment used in administering digitalis, having in mind its easily acquired habit and the ultimate depressing effects of large doses.

Alcohol is an excellent sterilizing agent for every delicate instrument which might be injured by other methods. A 60 per cent. solution is best.

It is an efficient gargle, but a weak solution of tincture of iodine is perhaps as good and is less irritating.

It is most soothing and beneficial as a "rub" and is an excellent preventive of bedsores.

The internal use of alcohol is by far the most important. Its absorption from the healthy stomach is rapid, occurring in from one-half to two hours if the stomach is empty and the alcohol is in concentrated form. It enters the blood stream unchanged and is the only food absorbed unchanged from the intestinal tract. It is rapidly oxidized, only about 2 per cent. of the ordinary dose being excreted by the kidneys and lungs. If a large quantity is taken at once, the amount so excreted will not exceed 10 per cent. It has a high caloric value, about 80 per cent. of that of fat.

Alcohol has no effect on the temperature save by its causing increased radiation by virtue of dilating the peripheral vessels. Its effect on digestion is due to an increase in gastric secretion, which is to some extent counteracted by its inhibitory action on the gastric ferments.

Good brandy is especially helpful in relieving flatulence. Alcoholic therapy at meal time will greatly benefit some feeble old men and women who have little appetite, cold skins and "atonic dyspepsia."

Alcohol has a well defined role in treating infants and children. Brandy in cases of collapse following summer diarrheas acts not only as an evanescent but as an easily and rapidly digested food, supplying by its rapid oxidation the energy and heat in the pneumonias of children.

The author had gratifying results from the administration of alcohol in cases of Asiatic cholera.

Aside from its mental effect, alcohol is not especially

beneficial in curing the poison of snake bites.

In selected cases of pneumonia, alcohol is invaluable; in some, occurring in alcoholics, it is mandatory. In those with extreme depression, with a feeble heart, low muttering delirium, brown dry tongue and distended abdomen, alcohol given in large amounts over a period of several days has saved many lives. The heart improves, the delirium gives way to a comparatively calm restfulness and optimism, and from a rapidly sinking maniac, the patient is transformed to a more rational being. Typhoid fever cases receiving alcohol improved. Generally, it is beneficial in septic cases, surgical as well as medical.

Alcohol given in cases of diabetes reduces the dose of insulin by acting as a substitute for part of the carbohydrate of the diet, as it is excellent fuel for the burning of fats. It does not become glycogen, and as it is not ketogenic, does not add to the risk of poisoning the patient.

Alcohol has been of benefit even to athletes in training, being given with dinner.

The nausea of seasickness is often relieved and even cured by alcohol.

The greatest value of alcohol lies in its hypnotic and psychological effect. It gives the patient a feeling of repose and well-being that plays so vital a part in helping him over a crisis or in rendering suffering more bearable. It should be used fearlessly and with the good judgment employed in the use of other drugs.

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## THE BUSINESS OF MEDICINE

By the business of medicine may be meant the economic return of the medical man's labors. The necessary needful whereby he may support himself and his family, create an estate for their future support in case of his prior death wherewith he may satisfy the various obligations which belong to his personal and professional lives.

That a change has taken place in the relation between the public and the physician is quite as apparent as that change which has come about between the public which owes and those which this public owes. This is not debatable, it is axiomatic. With the advent of the automobile, the tremendous increase in extravagance of the present day, together with the high cost of living and the cost of high living, people have in a very great measure lost their sense of obligation and postpone their just and honest debts as long as possible if not indefinitely. This condition of affairs is evident to anyone who gives credit, and there is no occupation, trade, profession or calling which gives credit as readily as does the medical profession. Admitting that ours is a noble profession and that its first aim is a life of busy usefulness, nevertheless the above considerations must be satisfied if the doctor is to live and die free from debt. These conditions have been met by various changes in the business world. Profits are in some cases so great that those who pay make good the losses for those who do not, and in installment payments a very few



payments begin to show a profit to the merchant. That physicians pay enormous profits for all their necessities is beyond question, and the only explanation possible is that which is equally the case in other lines of merchandise—profiteering.

The cost of physicians' supplies are absurd and unwarrantable and are in a large measure responsible for ever increasing hospital rates, the graft thereby being passed on to the poor and needy. X-ray materials are beyond all sense and reason and simple apparatus placed in the class with instruments of precision. As long, however, as medical men are gullible enough to pay eight dollars and a half for a pair of scissors and two dollars for a knife that can be made and sold at a profit for, shall we say, fifteen cents, this sort of thing will continue. Even a benevolent and protecting government allows a charge of seven dollars a gallon for alcohol which can be made and sold at a profit probably for forty cents. Theoretically, one is led to believe that denatured alcohol is an acceptable substitute, but it cannot be burned in a lamp without smoking, it is harmful to the skin and the profession is deprived of one of the very best antiseptics it ever used. Salvarsan is another valuable remedy from which countless thousands were made by the promoters and with hardly a voice raised in protest.

A new class of professional workers has recently come into being, the salaried physician. He is either absurdly underpaid by the factories which employ him, or else is distinctly overpaid in comparison with the work he has to do. When it is realized that a five thousand dollar salaried position is equal to a ten thousand dollar practice, it will be seen that it is the practitioner who faces high expenses, a variable income and a life of hard labor often bordering upon hardship who bears a far greater burden than the salaried official who need have no equipment, has many of his expenses paid and ample time for study, reflection and recreation, with able assistants, who by the way, often do most of the real work, and who are responsible to no one or perhaps the man higher up.

Whatever progress may have been made in recent years there is in the mind of the rising generation but little thought of responsibility, of fair play or the duty of paying just and honest debts. For debt is in its very essence a crass violation of the spirit of fair play and of the golden rule. Again, with the increase of charity and philanthropy there has been an enormous increase in the pauper class; those who are so mendacious as to depend upon charity for the whole or a part of their needs. The present day system of benevolence makes this very easy. The free clinic, the free almost everything relating to sickness together with public health is not only curtailing in a tremendous degree the sphere of usefulness of the so-called family physician, but is making a race of paupers of our people and lowering their stamina and morale by taking from their sense of responsibility, obligation and pride. The activities of our school, district and industrial nurses by guiding cases into selected channels and by assuming responsibility which they should

not assume is, in certain localities, a menace to the independence of those who should not accept charity and is furthermore much the practice of medicine as can be. It would be easy to multiply instances of interference with physician's orders by nurses, of the practice of medicine and surgery, of the urging of charity cases into certain professional hands, of the abuse of charity in our hospitals, and the recommendation of certain specialists by various authorities.

Is anything being done to correct these abuses? There is not. They are on the increase, as any busy physician will testify.

Another abuse to which attention should be called is the taking, at greatly reduced rates, of radiographs for the medical profession. The fault here is twofold, in the physician who sends his case to the hospital, and in the hospital which does the work. Many of these cases can easily afford the usual fees. No case should be admitted to a hospital x-ray laboratory which has not applied for hospital care in the usual way, through the house or out-patient.

Now nothing in this should be so construed as to belittle the need of worthy and deserved charity, or the need of relief of the truly poor, but just glance over the benches of our out-patient departments and see the fur coats, go into the wards and see the laces, hunt up the homes and see the autos and radios and see how much of it is really needed and deserved.—*Rhode Island Medical Journal*.

#### CHEWING-GUM AFTER TONSILLECTOMY

In a recent number of the *Therapeutic Gazette*, Dr. William H. Spencer, of Philadelphia, draws a somewhat lurid picture of the septic condition of the throat after tonsillectomy, and of the systemic absorption of toxins from the "putrefying mass" which covers the wounds. He is scornful on the subject of gargles, though he does not mention the probability that they do not reach the tonsillar fossæ at all, and it would seem that he has no experience of spraying or syringing the throat in this condition. But he is an enthusiastic advocate of the use of chewing gum after operation, and states that "the throats of tonsillectomized individuals using chewing-gum as an after-treatment do not become infected. Secondary hemorrhage is less frequent."

"Healing is more rapid. A full diet being taken, resistance of the individuals is maintained, little or no weight is lost, and no post-tonsillectomy recuperation period is needed. Chewing stimulates the secretion of saliva, which, being swallowed, laves constantly the wounded surfaces and lubricates the pharyngeal mucosa. The attrition of swallowing keeps down the membrane formation to the minimum, so that the usual white patches covering the tonsillar fossæ, which have often been mistaken for diphtheric membranes, are in some cases entirely absent."

Knowing that they will at least not be deprived of their chewing-gum, many members of the rising generation who may be willing to abstain from other things will be less reluctant to have their tonsils removed.

## WHEN IS SYPHILIS CURED?

## ADEQUATE TREATMENT FOR HEREDITARY LUES

Dr. Frank S. Schoonover of Fort Worth in Texas Interology says:

In considering hereditary syphilis a special appeal is made to one's sympathy by the knowledge that the patient is the innocent victim of a terrible disease, and that this innocent victim has a disease that could have been prevented had some good doctor taken proper precautions in time.

I wish to discuss briefly the story of syphilis in children, but before doing so I will review a few facts about syphilis in general. According to the United States census of 1920,<sup>1</sup> syphilis stands fourth as the cause of death throughout the country, organic disease of the heart, pneumonia and tuberculosis slightly exceeding it. The general incidence of syphilis among the population of the United States is variously estimated at from twelve to twenty per cent, but certainly it is high. J. Whitridge Williams<sup>2</sup> found syphilis as the cause of 26 per cent of 703 fetal deaths among 10,000 consecutive deliveries. He was able furthermore to show that 40 per cent of the premature deaths were due to syphilis. Cruikshank<sup>3</sup> agrees that the incidence of congenital syphilis is probably only about 1 per cent of all the children born. This is a high percentage, especially when it is considered that the late sequelae of syphilis are disabling frequently rendering the child unfit for self support. Lemaire and David,<sup>4</sup> however, found sufficient evidence to make a diagnosis of syphilis in 19 per cent of 1,000 infants examined at one French clinic.

What are the early manifestations of congenital syphilis? These congenital syphilitic patients fall into three groups; first, those born with active open lesions, or who develop definite evidence of lues within the first eight weeks of infancy; second, those with latent lues, which remains undiscovered until some intercurrent infection or until some unusual strain, such as that put upon the body at puberty, brings out active manifestations; third, those children who have no active evidence of lues except for their delicate health or their backwardness.

Congenital lues can produce any of the lesions that are seen in the adult; but there is no regularity in its course to make the diagnosis easy. The various factors determining the character of the lesions and the virulence of the infection are by no means settled. The spirochaeta pallida does not follow the generally accepted laws of immunity, nor does the resistance of the patient rest upon so simple a result as an acquired immunity to the organism. It has been shown that the spirochaeta pallida exists in several strains, with a predilection for different tissues; that is, one produces predominantly skin lesions, another principally lesions of the vascular system, while others prefer to attack the central nervous system. There is definite evidence to show that syphilis is decidedly a general infection,

regardless of the fact that the manifestations may be predominantly local in character. In congenital syphilis the disease may produce typical and severe lesions in the skin and mucous membranes with late or no involvement of the central nervous system. Again, the bones or vascular system may be the site of the most severe lesions or the central nervous system may give the first indication that the child is diseased.

We may summarize the lesions of hereditary or congenital syphilis as those of the skin, usually as bullae of the palms and soles (although any type of luetic skin lesion may occur), mucous patches and fissures about the orifices of the body; those of the bones, as epiphysitis, osteochondritis and periostitis, particularly of the skull, tibia and fingers, producing lesions easily confused with rachitis and tuberculosis; visceral disease, usually as hepatitis and splenitis; those of the central nervous system which may become evident very early in life, as idiocy at puberty, or later as juvenile tabes or taboparesis. However, these types of the disease do not follow any hard and fast rules.

The group of symptoms that particularly concern the ophthalmologist and the otolaryngologist are those of coryza with ulceration of the nasopharynx, which may extend into the eustachian tube, thereby producing otitis and deafness; perforation of the nasal septum, producing a saddle nose; perforation of the palate; chondritis of the epiglottis with stenosis, or ulcerating gumma of the tonsils. These lesions may occur early in the life of the child or make their appearance late. The typical Hutchinsonian teeth occur only in the second dentition. Iritis, choroiditis, interstitial keratitis, ptosis, strabismus, optic atrophy, orbital exophthalmos, and nystagmus may all be of syphilitic origin, and most commonly make their appearance about the time of puberty, but they are occasionally found during the first few months of life. Hydrocephalus, meningitis, encephalitis, myelitis and peripheral nerve palsies may all be the results of syphilis.

The diagnosis of these conditions can be made by any doctor if he will take a careful history and examine the child thoroughly. Unfortunately, the Wassermann reaction is very frequently negative in congenital syphilis for many months after birth, and the sense of security in the present day that such a negative reaction gives is nothing short of tragic.

Certain historical facts should always be asked the parents in every case in which the diagnosis is obscure. The mother frequently gives a history of several unexplained miscarriages; but will often deny the knowledge of a chancre or a secondary eruption. The father will more frequently admit having had a chancre, and the blood of either or both may show a positive Wassermann. That parents may pass hereditary syphilis on to the third generation is very doubtful, although there are several cases reported to show that they may do so. The sick child of a parent who has once had syphilis should always be considered syphilitic until proved otherwise.

The use of the spinal puncture has a bad reputation among patients, but its diagnostic value is very

1. Mortality Statistics, United States, 1920.

2. Williams, J. Whitridge: Bull. Johns Hopkins Hosp., November, 1923.

3. Cruikshank, J. N.: Brit. Med. Jour., Vol. ii, p. 593, 1922.

4. Lemaire, H., and David R.: Bull. Soc. de Péd. de Paris, May, June, July, 1923, p. 214.



great. Very frequently, in adults as well as in children, the blood may show a negative Wassermann and the spinal fluid a positive, together with an increased cell count, a positive globulin and a syphilitic colloidal gold reaction. The luetin test and many others are used occasionally, but are largely confirmative in value.

When a disease is so much written about and the results of poor treatment are as disastrous as in the case of syphilis, it is the duty of every doctor to combat it. For instance, by a process of education and propaganda, the average layman has come to have definite and fundamentally correct ideas about the seriousness of tuberculosis, and as a result, the disease is being much better handled and the number "cured" much greater than twenty years ago.

The application of the word venereal to syphilis has been and is the great stumbling block to its early recognition and adequate treatment. So long as syphilis is considered a reason for ostracizing and socially abusing the sufferer from the pulpit and in polite society, this scourge will never be controlled nor adequately treated. About 20 per cent of conjugal syphilis is innocently acquired; that is, usually by the wife from an infected and inadequately treated husband. Certainly, the child with a syphilitic taint is innocent! It is time that everyone throw off all hypocrisy and squarely face the facts.

W. W. Graves<sup>5</sup> of St. Louis says: "It is safe to say that not more than 10 per cent of the total number of syphilitics, who come under medical observation in the early periods of the disease, receive what is believed to be 'adequate treatment'; hence the number of adequately treated cases is insignificant when compared with the number we believe to be inadequately treated and with the number who either ignore or are unaware of their infection."

What is considered adequate treatment by the best men in the country? Schamberg<sup>6</sup> is a good example of the best. He believes that the "irreducible minimum" of treatment should be, regardless of the effect upon the complement-fixation reaction (the Wassermann), three courses of treatment the first year, with an average duration of from two to three months per course; two during the second year, and one in the third. This does not constitute a sufficiency of treatment, but is merely the least possible amount any given case should receive.

If one should sit in any syphilitic clinic and hear the history of treatment that the majority of patients have received since their infection, he would be absolutely convinced that something is radically wrong. Most of these patients have received two or three doses of neosalvarsan, occasionally ten, scattered over two or three years, with a few mercury protiodide pills to take along in the interval. Many of them have syphilis of the central nervous system, severe cardiovascular syphilis or affections of the cranial nerves. *It is now known that the majority of these late se-*

*quelae, ninety per cent and over, can be prevented by an early adequate treatment.*

The reason that many of these patients have not received adequate treatment is because they are afraid to have it known that they have syphilis, because they will be marked as socially unfit. They often patronize the advertising quack who will guarantee a cure after two or three doses, depending upon how much money the victim has. Many doctors, not quacks, are without sufficiently accurate knowledge of the disease to recognize the stage of the disease and to know what treatment will give the greatest possibility of arrest or cure. Then, too, the average fee charged for a single dose of salvarsan is so large that the patient cannot afford to carry on his treatment for two or three years and remain under observation for five years. As a result, the patient must either take occasional treatment, go to a free clinic, or he must ignore the disease.

Adequate treatment of hereditary lues differs in principle not one bit from the treatment of the adult syphilitic; the differences depend upon the mechanical therapeutic difficulties and the dosage.

The drugs accepted as the best in the treatment of adult lues are the new American arsphenamin, mercury and the iodides. Neosalvarsan, because of the simplicity of its administration, is used in place of the arsphenamin by many men, while the most men reserve it for those patients who do not tolerate arsphenamin well and those with small veins. Sulpharsphenamin is rarely used in the adult because of its low therapeutic efficiency. Tryparsamid, a new arsenical, is the most promising drug developed within the last two years; it offers renewed hope to the hitherto practically hopeless group of general paresis. From the reports of Lowenhart<sup>7</sup> and others, this drug is performing therapeutic wonders among this pathetic class, reclaiming a very high per cent of them to a self-supporting condition. Bismuth is still in its experimental stages, and the results with it are not wholly encouraging.

Certain factors must be taken into account before treatment is begun and after a searching examination of the patient. These are the general resistance of the patient, the extent and seriousness of the visceral involvement, and the presence of an intercurrent infection. Not the least important is the stage of the disease in which the child is presented for treatment. When the child has an active skin and mucous membrane eruption, the indication for immediate and active treatment is self evident. When the child is presented in a latent stage of the disease but is weak, anemic and not showing active disease, the treatment should be outlined with caution. If there is such a thing as immunity to infection, whatever its degree, it must be conserved, for that is the very thing that the treatment itself is planned to do. When, however, the late manifestations of latent lues begin to show renewed activity, as at about puberty, active and intensive treatment is again indicated.

There are two ways in which to administer the

5. Graves, W. W.: "Principles in Modern Recognition and Treatment of Syphilis," Amer. Jour. of Syphilis, January, 1924, Vol. viii, p. 74.

6. Schamberg, I. F.: "Modern Conceptions of the Treatment of Syphilis," Penn. Med. Jour., January, 1923, Vol. xxv, p. 228.

7. Lowenhart: Jour. A. M. A.

arsenicals, either as massive doses over a short period of time, with the attempt to sterilize the patient of the spirochetosis, or in smaller doses over a long period of time, with the idea of increasing the patient's general health and with a secondary, but not radical spirocheticidal action. No hard and fast rule can be laid down to govern the treatment of any particular case, and the patient must be treated on the basis of his general health and not by any rule of thumb.

In general, the treatment should be given in courses, including arsenic as arsphenamin or neoarsphenamin in older children and adults; and sulpharsphenamin in small children. Mercury should be given in the intervals between the arsenical treatments, in the form of daily rubs with mercurial ointment or by intramuscular injections of some of the mercurial salts, preferably the soluble salts, once or twice a week. Those with marked renal damage should be given the combined treatment with caution, but if a careful watch is kept on the urine, serious consequences from kidney damage rarely follow. The dosage must be suited to the age and weight of the patient. The first dose of the arsenical should be only one-half the reckoned average dose, to determine that the patient has no idiosyncrasy to arsenic, and that he will not have a severe Herxheimer reaction. The use of mercury for a week before the first dose of arsenical also tends to prevent a serious reaction from the arsenical.

The treatment should be continued in courses of from six to twelve doses of the arsenical and the accompanying mercury over as many weeks; a rest period of six weeks is then given in which the mercury is continued; at the end of that time treatment is discontinued altogether for two weeks or longer. Before treatment is begun again, a Wassermann test is made, and if that is negative, a lumbar puncture is done, with a complete examination of the spinal fluid. Three such courses are given the first year and as many each year thereafter as the condition of the patient warrants.

In those patients who are intolerant to arsenic, mercury and the iodides will often work wonders, and in some of them the addition of bismuth has been beneficial. Arsphenamin and bismuth is better treatment in others.

The results of treatment of the lesions commonly seen in the eye, ear, nose and throat are usually good. The disappointments come in certain late cases, which have relapsed after insufficient treatment and in those who come for treatment after much tissue has been destroyed or in whom a complete paralysis of some of the cranial nerves has taken place. Even in this group, benefit may be expected and the general health improved, although the scars of the healed disease may remain.

Tabes and paresis should be treated intraspinally as in the acquired disease, but the results in children are not so good as in the adults.

When is the patient cured? That is the most serious, and at the same time the most baffling question to answer. One syphilographer has said that none but a wise man could answer that question, and he,

by answering it *positively*, would thereby prove himself a fool. The following is a fairly accurate criterion upon which to release a patient from active treatment: After treatment has been continued in full continuous courses over two or three years up to the tolerance of the patient, if the patient's blood Wassermann remains persistently negative for two years after the last treatment, if there is no clinical evidence of active lues and if the spinal fluid is normal, it may be presumed that the patient is cured. Observation must be continued for at least five years, and probably should be continued throughout the patient's life. Relapses are prone to occur, and by this prolonged observation the indication for more treatment can be immediately met.

Adequate treatment of hereditary lues means that the therapeutic needs of *each particular patient* have been met.

#### THE MODERN SHOE, AS A FACTOR IN FLAT FOOT\*

W. V. GAGE, M.D.

WORLAND, WYOMING

Thousands of pages have been written and read, during the past ten years, on the subject, "Flat Foot," "Weak Foot" and "Fallen Arches," and the causes which allow this crippling handicap to manifest itself; and other thousands of pages have been filled with descriptions of operations or mechanical devices or exercises, any or all of which are advocated for the amelioration of this serious pathological state.

To date, I have seen nothing in literature, which comes very close to offering a logical explanation as to the causative factor back of the broken arch and the weakened muscles and tendons, which allow the arch to collapse, and weak foot manifest itself.

The probable reason back of the obscurity as to the etiology, in flat foot, is that the *real guilty factor* is so patently obvious that it has been overlooked..

I think that I shall be able to demonstrate that the *modern shoe* is responsible for those cases of flat foot not due to trauma, but we must, of course, also keep in mind that we are now, because of heredity, breeding children with weak arches, and a tendency toward flat foot.

By the term, modern shoe, I do not refer to any of the "freak shapes" in leather, which sometimes pose as foot coverings; neither do I desire to discuss the high-heeled crippler, which most of our women still wear, in spite of the fact that, if our women didn't, and the cannibals did, our Missionary Societies would at once take steps to make the poor cannibals cease doing so.

In referring to the shoe, which I think is doing the damage, I am calling your attention to the one you are all wearing, as you read this paper; and the astounding thing is, that we have allowed this archaic, leather cripple-maker to damage our feet, one generation after another, without suspecting it, convicting it of the crime, and ostracizing it, as a penalty.

#### THE FLAT INSOLE

A line, drawn centrally along the bottom of a normal,



unshod foot, gives a series of curves, concave for the heel, convex for the arch, concave for the ball, and crossed at the end, by five lesser convexities, for the balls of the toes, while lines drawn at right angles to the center line, across the bottom of the foot, show crescent shaped curves of various forms, with their concavities upward.

A line drawn from heel to toe, down the inside center of the modern shoe, would be almost straight; and cross lines, at right angles to this line, would be almost equally straight.

These straight lines of the insole of the modern shoe demonstrate a more or less flat, unyielding surface, and this *flat inside*, is the prime, present day flat-foot producer.

Take a plaster cast of the inside of a new shoe, and note the comparative flatness of the sole, and you will cease to wonder as to the "why" of flat foot, especially if you take a like cast of a much worn shoe, and note the difference in the inside contour.

These two casts will demonstrate the great indignity which must have been imposed upon the imprisoned foot, when it was asked to compel the stiff, inflexible materials which go to make up the insole to show the natural curves of the foot-sole after months of wear.

When the time comes that we have almost worn the shoe out; when we have, with the soft tissues of the foot, compelled the inflexible "foot prison" to be wearable and "comfortable as an old shoe"; when the time comes that a combination of foot dampness and innumerable applications of body weight in walking have so moulded the shoe sole that it conforms to the shape of the foot and can be worn with comfort, shoe shabbiness demands that the old shoe be discarded and the moulding process repeated, with a new pair of shoes.

Is it not wonderful that so many of us have escaped the broken arch and, if acquired characteristics are transmitted, is it not surprising when we find a perfect arch, among shoe wearing peoples?

#### THE FLAT HEEL

Add to the above faulty inside shoe construction, another item, which is found in almost every shoe manufactured, and you have the most complete and efficient foot wrecking combination which could be devised. I refer to the *flat bottomed shoe heel* and its function in not allowing a lateral roll or swing to the ankle joint.

The bottom of the shoe heel, the part that comes in contact with the ground, should be oval, as is the bottom of the heel of the infant foot, thus allowing for constant strengthening exercise of the lateral ligaments of the ankle joint.

This ideal heel, besides being oval, should be but little thicker than the sole of the shoe, to which it is attached, for the mechanical principles on which the foot is constructed demand that, for perfect efficiency, the long axis of the foot shall be parallel with the supporting surface with which the shoe comes in contact.

Economy, as based upon preparedness for long wear, first dictated the thick heel, and shoe-makers still

maintain it, in spite of the fact that it is as archaic as would be a whip socket on an automobile.

The "run-over heel," on an old shoe, offers mute evidence of the effort, upon the part of the foot, to compel the flat surfaced heel bottom to assume an oval contour.

#### THE IDEAL SHOE

If shoe manufacturers would make the model for the inside of a shoe from composite photographs of plaster casts of hundreds of feet of a given age, and build a shoe, to the inside of which the average foot will conform without pain or discomfort and attach to the shoe, an elastic heel, the oval bottom of which closely approximates the heel of the normal foot, they will have produced a foot covering which will check the present deplorable tendency toward flat foot and do much toward correcting the cases of flat foot, now existing.

I am hoping that this article, when published, will fall under the eye of some shoe manufacturer, who is such a combination of philanthropist, capitalist and adventurer that he will dare to place upon the market a shoe designed along the lines suggested, and thus prove the truth or fallacy of the ideas just presented.

\*Read at the Buffalo Meeting of the Wyoming State Medical Society, June 23-25, 1925.

#### MALARIA TREATMENT OF PARESIS INSTITUTED IN THE BROOKLYN STATE HOSPITAL.

The treatment of paresis and tabes by inoculation with malarial organisms first undertaken and now vigorously advocated by Professor Wagner Jauregg of Vienna, has been tried and applied in numerous institutions treating those who are tabetic or parietic, and is now, with the approval of the Commissioner of Health, to be tried out in the Brooklyn State Hospital in Brooklyn, N. Y. This work is to be under the supervision of Dr. John L. Macumber.

In instituting his therapeutic procedure, it is of interest to note that from the public health point of view such malaria treatment must be so carried on as not to constitute a public hazard. There is practically no danger of malaria spreading if care is taken to screen completely the patients treated. The danger of spreading the disease, under proper precaution, is further minimized because malaria that propagates in the human host is in an asexual cycle and after several human passages gametocytes are no longer present in the blood. The anopheles mosquito is apparently unable to transmit this form of artificial malaria. Another factor of safety in New York City is the fact that there are no anopheles in this city at the present time.—*Bulletin of N. Y. City Department of Health.*

#### BURNING THE CANDLE AT BOTH ENDS

"I have only one request to make," groaned the college man who had come to work in the harvest.

"What is that, Mr. Smart?" returned the farmer.

"Please let me stay in bed long enough for the lamp chimney to cool off."—The Open Road.

## Original Articles

### THE CONQUEST OF DISEASE\*

JOHN J. McSHANE, M. D., Dr. P. H.

State Department of Health  
SPRINGFIELD

The title of this paper would perhaps be more correct if it were "The Solved and Unsolved Problems of Communicable Disease," for not all communicable diseases have been controlled the world over, even though in some countries like the United States we do not have diseases such as bubonic plague, cholera, typhus fever and other diseases that are epidemic at times on the continent. And with my limited time I can only give a summary of some of the diseases that have been fairly well controlled.

Man has lived on the earth for hundreds of years and his knowledge relative to prevention of disease prior to the nineteenth century was so lacking that little headway was made in the control of those diseases that are now known to be communicable.

In very early times, plagues and epidemics were believed to be due to supernatural agencies and epidemics were regarded as visitations of demons or evil spirits. Another theory advanced was that epidemics were caused by the position or movement of heavenly bodies. Even Noah Webster believed that volcanic eruptions or earthquakes were partly the cause or had something to do with epidemics. And a third theory was that foul air or miasmas were the cause of epidemics. This theory appears to have originated with the Greeks and Romans and some of our great scientists believed this to be the cause of epidemics even up to the middle of the nineteenth century, for it was not until the establishment of bacteriology that we were at least given an insight into the cause of disease.

The beginning of scientific and preventive medicine dates back to the early part of the eighteenth century when Edward Jenner established for the first time the use of vaccine from cowpox in the prevention of smallpox in human beings. Some fifty years later, Davaine, a French pathologist, found, on examining the bodies of cattle which had died of anthrax, the constant presence of minute rods shown later by Koch to be the cause of the disease.

Louis Pasteur's work on fermentation was really the beginning of bacteriology and stimulated by the successful investigations of Pasteur, Joseph Lister became convinced that many wound diseases were probably due to germs and by using antiseptics, paved the way to the present practice of aseptic surgery. It was from 1857 to 1863 that the germ theory of fermentation was definitely established when Pasteur demonstrated that the aging of wine by bacteria could be prevented without changing its taste by heating it from 55 to 60 degrees Centigrade. This principle is now used in the pasteurization of milk. About this time Pasteur also developed a vaccination against rabies and as a result of his investigations, a number of institutes have been established all over the world for the treatment of this disease. Twenty years after Pasteur's work on fermentation, Koch announced his discovery of the organism of tuberculosis and within a space of four or five years there was also announced the discovery of the organism of Asiatic cholera, diphtheria, tetanus and the bacillus of typhoid fever.

During the last half century, Pasteur's saying that "It is within the power of man to rid himself of every parasitic disease" is being realized, for today our average length of life, according to the 1920 census, is 56 years. The average duration of life has been increased 15 years in many countries of the world during the past 75 years. This is indeed a great achievement, for the average length of human life in the sixteenth century was from 18 to 20 years; in the beginning of the last century 25 years and in the beginning of the present century it advanced to 48 years, and, as I stated before, at the present time it is 56 years. With the advances in scientific and preventive medicine, if the knowledge we possess at the present time were generally applied, fifteen years could be added to the average span of life.

Before the eighteenth century, smallpox occurred as frequently as does measles today and was a disease of early child life. And until Jenner discovered that the vaccine from cowpox would vaccinate the people against this disease, it was estimated that over 600,000 people died each year from smallpox. In Illinois more than 5,000 cases were reported during the past five years and more than 320,000 cases in the United States

\*Read before the Section on Medicine, Illinois State Medical Society, Champaign, May 19, 1926.



during the same period. In some of the eastern states, such as Massachusetts and Pennsylvania, where they have compulsory vaccination laws, epidemics of smallpox are seldom found. The same is to be said of some of the European countries where, in 1923, 195 cases were reported from France and only 17 in Germany. This low morbidity is due to the fact that the people of these countries are thoroughly vaccinated.

In January, 1918, an epidemic of typhus fever swept over Serbia and it was reported that 9,000 persons died from this disease and since 1918 over 30,000,000 cases of typhus have been reported from Russia with some 3,000,000 deaths. This disease is transmitted by the body louse, and in studying the cause of transmission, Drs. Ricketts and Prowaseak, martyrs to science, both succumbed to the disease. Typhus is sometimes brought into this country by immigrants, but the number of cases are small and are limited to cities on the coasts.

During the fourteenth century one-fourth of the population of Europe succumbed to bubonic plague and from 1896 to 1917 some 10,000,000 persons died in India from this plague. It is claimed that over 250,000 deaths occur in India annually from this disease. Some sixteen years ago, back in 1910, a very virulent epidemic of pneumonic plague swept China and thousands of persons died. At different times bubonic plague has also been brought into this country, but as in typhus fever, the cases have been limited to the coast cities.

Yellow fever has appeared in this country 112 times during the year from 1702 to 1878 and during this period two great epidemics occurred, one in New Orleans with 29,020 cases and 8,101 deaths and one in Memphis with 17,600 cases and 5,150 deaths. Prior to 1900, it was supposed that this disease was transmitted by fomites, but it remained for Reed, Carroll, Lazear and Agramonte to definitely prove that the mosquito was the agent that transmitted this disease. Unfortunately during the time this investigation was being carried on in Cuba, Dr. Lazear was accidentally bitten by an infected mosquito and died from yellow fever. As a result of the findings of the U. S. Army Commission headed by Dr. Reed, Gorgas was able to rid Havana of yellow fever and later, by applying proper sanitary measures in the Canal Zone, he was able to control yellow

fever in this zone and also reduce malaria and other communicable diseases in this area. In 1919, Noguchi found that yellow fever was caused by a spirochaete. No yellow fever has been found in this country for a number of years.

In 1884, Loeffler proved the diphtheria bacillus to be the specific cause of this disease and at the time this bacillus was discovered it was believed by many that diphtheria would be one of the communicable diseases that would be easily controlled, but progress has not been made in the control of this disease as was expected. It was not until 1892 that diphtheria antitoxin came into general use for both passive immunization and curative purposes and since then a marked reduction in mortality has taken place, but if the disease were recognized earlier and antitoxin given the first day, the mortality would be nil. In 1911, Schick discovered the test known by his name and by this test we can determine whether a person is susceptible to diphtheria. Shortly after the discovery of this test, toxin-antitoxin was developed for active immunization. Eighty-five per cent. of persons given three doses of toxin-antitoxin are found to be immune after a three months' period. Drs. Park and Zingher of New York are now using a detoxicated antitoxin which they call anatoxin. They claim for this product less reaction and a greater percentage of immunization and state that 95 to 97 per cent. are immune after a three months' period. Unfortunately, it takes a long time to educate the public. If they would only accept toxin-antitoxin as they should, in a very short time this disease, instead of being prevalent, would be a rare one.

During the past fifty years there has been a decrease in the mortality of scarlet fever, even though the morbidity rate has not been reduced. This is indeed remarkable inasmuch as up to a year or two ago we had no antitoxin for the treatment of this disease. For years a number of research workers have believed that certain streptococci were probably the causative factor in scarlet fever, but it remained for Drs. George and Gladys Dicks to show experimentally that a certain or specific streptococcus was the cause and that this certain or specific streptococcus produced a specific toxin and this toxin when injected into man is capable of producing a typical attack of scarlet fever. Until recently, quarantine, isola-

tion and pasteurization of milk supply were about the only practicable and dependable ways known to health officers in preventing and controlling scarlet fever. Now we have available a toxin for determining the immunity of an individual, toxin also for active immunization and an antitoxin for curative purposes. It has been found by tests that three doses of scarlet fever toxin are not sufficient to immunize susceptible individuals. At least five injections must be given and they are now giving a 500 skin test dose for the first injection, 1500 for the second, 5000 for the third, 15,000 for the fourth and 25,000 to 30,000 for the fifth.

Measles and whooping cough, the so-called minor diseases of childhood, each take a greater toll of human lives in Illinois than does scarlet fever. During the last five years more than 176,000 cases were reported and more than 154,000 of the cases occurred during the first six months of these years. It has been observed that measles runs in cycles, epidemics appearing every two years in cities and every three years in the country. This may be accounted for, in that there is a new crop of babies or a new crop of susceptibles every two or three years. A great amount of scientific research work as to etiology of measles has been carried on for the past quarter of a century. During the past two years, Drs. Tunnicliff and Ferry have found an organism which they think may be the causative factor. In a number of the larger cities, attempts are being made to collect convalescent serum from persons having had measles, it being understood that all serum thus collected be first tested by the Wassermann test for syphilis before being used on persons exposed to measles. In a number of studies made by Drs. Hoyne and Tunnicliff, they report very favorably on the goat serum in protecting children who have been exposed to measles. Of 17 children giving a negative history of measles, and who were given goat serum on the first two days after exposure, 13 showed no signs of measles. Seven children who received the serum on the third day or later came down with measles. In other cases, where convalescent serum was used as a control, the percentage of persons who contracted measles was the same as those injected with goat serum. A number of authorities are now advocating that

since a person will contract measles sooner or later, it would be well to give children a small dosage, say 2 to 5 cc. of the serum in the sixth or seventh day of the incubation period that it will so modify the disease that the attack will be mild and the child will be protected against a subsequent attack of measles. Where it is impossible to obtain convalescent serum, Degkwitz has used 30 cc. of adult blood from parents who have formerly had the disease and reports protection in half of the children immunized.

Whooping cough has yielded but little to preventive or curative efforts, but some pediatricians hold out hope that the paroxysms may be modified by the use of the x-ray. This is still in the experimental stage. Vaccines have not proved to be of the value we had hoped for.

Some authorities state that gonorrhea ranks with measles as to its prevalence and that syphilis causes directly or indirectly more deaths than any other disease. We know the cause, mode of spreading and method of prevention, but we have not made the headway in the control of these diseases that is possible. The public has not applied the knowledge contributed by the medical profession in combating this great human scourge. As has been said, "It remains for the future, involving as it does not only preventive medicine problems but broad sociological adjustments which necessitate the curbing of fundamental instincts."

Influenza is one of the respiratory diseases that we know little about other than it becomes pan-epidemic every so often. After a pan-epidemic of influenza, Brownlee states that it recurs in waves in intervals of 33 week periods, provided the 33rd week does not fall between June and December. Otherwise it occurs in multiples of 33 weeks, avoiding the warm months of the year. It is said that influenza may be due to any one of a number of different organisms. Olitzky and Gates think that the possible cause of influenza is *Bacillus pneumoniacus*, but they have not been able to give definite proof. If this organism later proves to be the cause of influenza it will greatly aid in diagnosis and perhaps later a vaccine can be made for preventing this disease.

Pneumonia stands near the head of the list as a cause of death and this disease has a higher death rate among children of one year of age



than during any other age group. Practical means of prevention have not been demonstrated but studies are being made by the Pneumonia Commission of Chicago and by the State of Illinois and we hope in the future that, as a result of this research, we will be able to reduce the incidence of this disease. Vaccines are being tried as a preventive and sera are being used in certain types of this disease.

Typhoid fever, one of the diseases which has been such a scourge in this country for years past, has been brought under control in many of the larger cities, as Chicago and New York, where it is absolutely negligible. This has been brought about by good water supply, good milk supply, compulsory pasteurization, with adequate sewerage systems, supplemented by widespread vaccination and follow-up work of health departments in checking source of the infection of this disease. Any community can determine its own morbidity and death rate from typhoid fever. This can be readily proven when in 1911 vaccination was made compulsory in the army and only four cases occurred in 1913 in an enlisted force of 80,000 men. If the dejecta from all cases of typhoid fever were properly disinfected before being disposed of and all contacts in the home and other exposures were immunized against typhoid fever, these two things alone would reduce the typhoid morbidity in Illinois 30 to 40 per cent.

Tuberculosis, which has been the scourge of the human family for years and years, has shown a slow and continuous improvement. This improvement antedates even the discovery of the tuberculosis bacillus, before milk was pasteurized and cows tested for tuberculosis. There has been a decided drop in mortality during this period. A great deal has been done toward improving the living conditions, also towards getting sanatorium care for those ill with tuberculosis, and better follow-up of those who have been exposed to the disease. Fresh air and open window rooms aid greatly in improving the resistance of the school children.

Professor Calmette, in collaboration with other workers in the Pasteur Institute, gives the results of protection afforded the new-born against tuberculosis by use of his B. C. G. vaccine. In his investigation which covered more than 5,000 children in France, he states that the mortality rate

in children under one year of age from tuberculous mothers is more than 25 per cent. and in Paris 32.6 per cent.; in those children that have been treated with his B. C. G. vaccine, the rate has been less than 2 per cent. as it saves 93 out of 100 babies that otherwise would die of this disease. It seems the immunity conferred lasts from 15 to 18 months and the children should be revaccinated again about the third year.

Many of the diseases I have just discussed have a seasonal prevalence that tends to periodic recurrence but we are unable to predict just when they will appear with any degree of certainty. Why these diseases occur and reach a peak during certain months of the year we are able only partly to explain. There are many factors which control seasonal prevalence other than climate and weather. Scarlet fever is a disease that is rarely found in the tropics and same may be said of diphtheria, but this is not true of pneumonia, tuberculosis, and influenza, for these diseases take a toll in the tropics same as in northern latitudes. Then again smallpox and measles when introduced into a virgin soil even during summer months become epidemic and continue so until the epidemic burns itself out or until there are no longer any susceptibles. This is well illustrated in two epidemics of measles, one in the Faroe Islands, where for 65 years the inhabitants were free from measles, and when the disease was introduced in 1846 over 6,000 of the 7,782 islanders contracted the disease and many died. The other and more striking epidemic occurred in the Fiji Islands in 1876 where among the population of 150,000 more than 40,000 deaths occurred.

Communicable diseases divide themselves naturally into three groups as far as their prevalence is concerned: insect-borne, intestinal and the diseases of the respiratory tracts. The insect-borne prevail mostly during the summer time. The intestinal diseases which have a world-wide prevalence include such as typhoid, cholera, typhus, and dysentery; insect-borne are yellow fever and malaria, and the respiratory group consists of diseases such as sore throats, influenza, common colds, scarlet fever, pneumonia, etc.

As Park so well states, "the severity of outbreaks of communicable disease will be determined by the relative susceptibility of the individuals making up the population, the type of

virulence and degree of virulence of the microbe, the degree of exposure and the health and living conditions of the people." A very interesting experiment relative to epidemic of mouse typhoid among white mice has been carried on by Topley in England. Topley exposed susceptible mice to convalescent carriers and then placed them in contact with a second group of susceptibles for a brief time early in the incubation period, yet long enough to transfer the microorganisms and the second group was similarly placed in brief contact with a third group and the third with the fourth, and so on up to ten groups. All the mice of the second group, which had been in contact with carriers directly from an actual case, took the disease and died. Only two out of five in the third group became infected and none were infected in the other groups. Dr. Topley thinks that presumably the mice were all susceptible but the microorganisms had lost their invasive power. In another experiment where he added susceptible mice to a group that had been immunized or passed through an epidemic, he found that after a large number of the susceptible mice became infected, those mice which had passed through the former epidemic also succumbed.

Dr. Frost of Baltimore and his co-workers have done some interesting work relative to carriers where a number of families were followed during the winter months and in no instance in these twenty families which had one or more carriers did a case of diphtheria appear. They also found, as did Dr. Topley, that the dangerous individual was the convalescent case or a contact with the diphtheria case, that the farther removed the carrier was from the case the less virulent the organism and no doubt that while these carriers are not virulent, they still produce enough toxin to immunize the individual that was a carrier and this may account in part for the higher degree of immunity among children on the east side of New York than in other parts of the city and rural sections of New York.

By these experiments on mice and by epidemiological studies in diphtheria, we learn that the case and convalescent carriers are the ones to guard against. The farther the carrier is removed from the case, the less virulent the organism. Organisms that have partially lost their virulence in passing from host to host, if they do

not start up new cases, at least immunize or partly immunize those that harbor them. By suppressing at the beginning outbreaks of communicable disease, the keeping up of the normal resistance of the people will in greater part help to keep down epidemics and, it has been said, "it is only when the normal conditions of the community are disturbed by war, famine or earthquake that widespread epidemics will occur."

#### DISCUSSION

Dr. S. S. Winner, Springfield: I want to emphasize a few points that Dr. McShane brought out, points pertaining to conditions that we deal with in this state every day.

1. Smallpox. Unfortunately we are dealing with smallpox every day. We have not only the discrete type, but we meet with the malignant type as well.

I attribute the reason for this condition to several factors: 1. The ignorance of some people as to the value of vaccination. 2. The indifference or unwillingness of some of the members of our profession in teaching their patients, or the people, of the value of vaccination.

You all know we have a certain class of people who, through misguided propaganda, are against vaccination.

The health officer in the community is helpless if he has not the active co-operation of the physician. Vaccination absolutely protects the individual if the individual is successfully vaccinated in spite of Christian Scientists and osteopaths and chiropractors.

Unfortunately we cannot compel vaccination in this state. The only time in which we can enforce vaccination, and not even then can we enforce it, is when smallpox is prevalent in a community and threatens to become epidemic. And then we can only keep children from school.

We have the means of eliminating diphtheria just as effectively as smallpox. We can vaccinate susceptible individuals. Give toxin-antitoxin until the individual is immune; retest the individual six months later. If he is not immunized, repeat the dose.

One more point, scarlet fever. I have been working with Doctors Dick in the last few months in the state institutions. We found about 83 per cent. were completely immunized at five doses. Those not completely immunized were given an additional dose of 30,000. And in practically every one of those cases we secured complete immunity against scarlet fever.

Dr. Samuel E. Munson, Springfield: I am very glad that Dr. McShane has brought up the subject of control of diseases before this section. It seems an old and time worn thing to talk about smallpox.

Whatever your idea of the prevention of diphtheria and scarlet fever, we have resting upon our shoulders a very important thing to assist the authorities of our state and the authorities of our government in trying to prevent today and probably in the future to eradicate these diseases. The difficulty, I think, to quite an extent lies with the doctors themselves. We are too care-



less about our methods of quarantine. We are too careless about our own cases. We are very particular, as a rule, to criticize the other physician who has been careless with a neighbor's child near a family under our care that has contracted one of these diseases due to the carelessness of another physician.

The first thing when you are called to see a suspected case of contagious disease, the mother will say, "Doctor So and So was called next door and the child had a slight rash. I don't know exactly what it was. He did not ask for a quarantine at all." Now, in fifty per cent. of the cases of contagious diseases that I see as a rule this is the condition.

Now, gentlemen, I am reminded of a circumstance. We at one time thought there wasn't any known smallpox in the city of Springfield. This was in one of the best families. The boy had an eruption on the skin. And, after a period of 24 hours of observation, I ordered a quarantine in this case. One of the physicians in the neighborhood came by. I saw him in the hospital the next morning. He said, "You certainly have your nerve, Doctor, for ordering a quarantine on this family when there isn't any smallpox in Springfield." It was a good family. I might lose them because I did this. But I talked the matter over with the father. He said, "Doctor, I would rather have my son in quarantine for two weeks than to have anyone in this neighborhood exposed if it is possible this is a case of smallpox."

Now, with that frank sort of attitude, gentlemen, you are going to have the assistance of families under your care. And it is up to you, where the methods are known and the methods of the doctors so well understood as they have come down through the whole history of preventive medicine along the line of these contagious diseases.

There was another case at the same time of this boy's case which turned out to be also a case of smallpox. A man who was employed by the C. & A. Railroad was working down in the state. He had an eruption occur on his skin. It looked like smallpox to me. There was no smallpox anybody knew about at the time in the city. I asked him if he had been exposed to anyone who had smallpox. He said: "We have been doing a piece of work at Alton. An old man sitting across the table where I have been boarding had chicken-pox. He was 80 years old."

I reported this to the State Board of Health. An inspector went to Alton and found there was an epidemic which had been unrecognized by the local profession.

As Dr. Winner said, you have the methods of preventing these diseases. Be honest with your families. Be honest with your fellow practitioners. And when you see a case of rash, if it is only a bad rash, you are perfectly within your rights, if you ask for a quarantine.

But suppose you have made a mistake in diagnosis and the whole neighborhood is infected, or may be a public school, you are really responsible for such a condition.

Dr. Victor McClanahan, Aledo: I would like to ask

Dr. McShane to say a word about the borderline communities and the need of quarantine in pneumonia.

Dr. A. A. Crooks, Peoria: I would like to bring to you more forcibly what I feel is the laxity of the general practitioner in preventive lines, especially with the pre-school child. In our larger cities something is being done. In the smaller cities practically nothing is being done in a pre-school way.

I believe it is a duty that we owe our families that we immunize their children. They have a misconception of toxin-antitoxin. I believe it is the duty and the privilege of the general practitioner to call it to their attention and to assist upon immunizing these particular children.

We know that 90 per cent. of children from six months to six years of age are susceptible to diphtheria. Instead of using your Schick test—even though this is not a scientific statement to make—I believe we could dispense with the use of the Schick test between six months and six years, give toxin-antitoxin and then re-Schick to find out whether our child is still susceptible.

Certain physicians will go into homes, "I am not quite sure what this eruption might mean." A delay of diagnosis and a delay of quarantine. I could call your attention to many instances where I have had spread of contagion in my schools simply because of the negligence of that type of practitioner. I feel that this is not fair to the family, and certainly not to the community.

As a public health official I would ask you to go away from here with that particular thing impressed upon you very forcibly. The majority of us are very much on the square. I see that every day. I know that. But let us know conditions. We have state quarantine laws that permit us to hang a suspect card until the definite diagnosis may be made. Let us use more suspect cards generally.

Dr. John J. McShane, Springfield (closing): I do not think I could add anything further to what has already been said by Drs. Winner, Crooks and Munson, any more than to state we would be pleased to furnish toxin-antitoxin to anybody that wishes it.

A great many of the doctors may not know that the state furnishes Schick test material for determining the immunity of the children whom they wish to test, and also toxin-antitoxin for active immunization.

We are not yet in a position to furnish material for the testing of scarlet fever or scarlet fever streptococcus antitoxin for curative purposes. We hope to be able to do so in the future.

Relative to pneumonia, I may say, that at the present time we require isolation of the case, not the contacts, since the case is the one that discharges the virulent organisms and may be a source of infection to others. By isolating the case you minimize the danger to others.

Some authorities have used the certain types of pneumococci vaccines giving immunity for a short period of time during the winter months. Studies are being made in Pittsburgh and Chicago and we hope we will be in a position to give you something later on that.

The Chairman: Where can toxin-antitoxin be procured?

Dr. McShane: If you will address your letter to Springfield, we will be glad to send it to you. We keep our toxin-antitoxin at the Central Laboratory because of the short potency period. If you make your request to Springfield, we will be glad to send it to you.

P. S. At present time it is being distributed through our agencies.

## THE COLON AND ITS ABUSE\*

GRANT H. LAING, M. D.

CHICAGO

As Hurst has said, "The sins of the colon are its diseases," but one sometimes wonders whether it is not more sinned against than sinning, for with attacks from above with cathartics and attacks from below with enemas, it is indeed in a sorry plight.

A more thorough understanding of its normal anatomy and physiology and the routine employment of the different methods of examination that we have at hand are necessary if we are to recognize these faults early and institute treatment which will tend to relieve them. The muscular layer is the largest of the three coats of the colon and consists of an inner circular and an outer longitudinal portion. It has a double nerve supply. The sympathetic fibres for the colon and rectum originate in the lower lumbar region and stimulation of these diminishes the tone of the musculature and inhibits its movement. The parasympathetics (which are physiologically equivalent to the vagus nerve) are supplied through the pelvic nerves and stimulation of these increases the tone of the musculature and renders its movements more active. Sacral fibres from the latter end in connection with ganglion cells situated between the circular and longitudinal parts of the muscle coat where they constitute the plexus myentericus of Auerbach. This has been shown by Keith to consist mainly of nodal tissue, similar to that in the heart.

Normally the mucous membrane of the colon is kept moist by the secretion of mucus which renders the onward passage of the feces easier. Like all other mucous membranes, this mucous membrane reacts to mechanical and chemical irritation by the secretion of *excess* mucus to protect its delicate lining epithelium from injury.

Similarly to other hollow organs in the body the motor functions of the colon depend upon tone and peristalsis—the two being mutually independent. Thus peristalsis is often very active in the presence of decreased tone and may be weak or irregular in the presence of increased tone. The lumen of the gut depends on its tone and this in turn varies according to the amount of gas and feces present in the segment at the time. Because of this the internal pressure is normally constant and only rises when its tone or the volume of the contents is pathologically excessive—pain being then produced. We are more familiar with this adjustment of size to content in the stomach through our fluoroscopic observation of this organ.

The contrast afforded by the continuous peristalsis of the stomach, and the continuous peristalsis and segmentation of the small intestine on the one hand, and the completely motionless colon on the other in fluoroscopy following a barium meal, is very striking. One of the movements of importance in the colon is mass peristalsis, and two to three times daily a powerful peristaltic wave moves with great speed along a considerable length of the bowel, carrying the contents before it. This movement is preceded by a sudden disappearance of the normal haustral segmentation which returns after its completion. The gastro-colic reflex which follows the taking of food into an empty stomach is the main stimulus to this movement.

Two of the chief functions of the colon are the absorption of water and the storage of waste material. The contents are normally liquid in the cecum, mushy in the transverse colon, and formed in the pelvic colon, and if the bowels are moving regularly and completely there is no formed material above the last portion. The sensation of fullness in the rectum which leads to the desire to defecate is brought about by the entry into the rectum of some of the feces which have accumulated in the pelvic colon during the previous twenty-four hours.

A diet which produces insufficient mechanical and chemical stimulation of intestinal activity is perhaps the most common of all the causes of constipation. This is the result of the modern methods of preparing food. Moreover, in civilized countries the quantity of indigestible cellulose which is present in the food is generally softened to such an extent that it loses much of

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its value as a stimulant to intestinal activity. Vegetables and fruits in addition to their cellulose content contain chemical stimulants to intestinal activity, the most important of which are the organic acids and sugars.

In an ordinary mixed diet it takes twenty-four to forty-eight hours for the residue from the food to pass through the intestinal tract. Therefore, if an individual who thinks he is constipated empties his tract with a cathartic or large enema, there is no more residue for a bowel movement for at least one to two days and perhaps longer, depending on the type of food eaten. Since the amount, color, and consistency of the bowel movement are dependent to a great extent on the type of food taken in, it is easy to see why the patient gets into the habit of using cathartics and large enemas.

The function of a cathartic is to stimulate peristalsis and produce rapid emptying. A small percentage of individuals can take cathartics *often* over a period of years without distress, but the great majority because of this long continued irritation, develop perverted contractions in the large bowel giving rise to the clinical symptoms of pain, fullness, pressure and weight, bloating with flatus, and belching, sometimes associated with nausea and even with vomiting, but this is rare.

With his enormous experience the late Dr. B. W. Sippy has said that the greatest cause of abdominal distress is this nervous irritability of the lower bowel, aggravated by cathartics and large enemas. He has used the term, "irritable bowel," a non-inflammatory irritation in contrast to "colitis" which is much rarer and denotes an inflammatory condition, and should never be diagnosed without evidence of inflammation, as shown by stool and sigmoidoscopic examination. One must realize, of course, that certain foods and combinations of foods are irritant and cathartic in action, especially because of the organic acids they contain, as well as the cellulose. A well known example of this is the "boiled dinner" or sauer-kraut which the patient says "disagrees" with him, or of apples because of the mallic acid they contain, or the lactic acid in buttermilk.

A typical history would give the following complaints:

Abdominal distress with pressure, fullness and weight;

Rumbling and gurgling across abdomen;

Constipation and catharsis;

Nervousness with nausea at times.

The distress in the abdomen may vary from a dull ache to cramp-like pain, and may be localized anywhere along the course of the colon or generalized over the whole abdomen. May occur while eating, shortly after, or at any time. Often present in the morning before breakfast. These points differentiate it from an uncomplicated peptic ulcer. Belching-passing of gas by bowel, and a bowel movement often give much temporary relief or the distress may be distinctly aggravated just preceding or immediately following defecation. Rumbling and gurgling are marked at times. There is usually a history of long standing constipation, and the frequent use of cathartics and large enemas over a period of years. Physical examination frequently reveals a colon which is palpable as a cord-like structure practically throughout its entire extent. It derives its name "ropy colon" from this observation. It is usually very tender to pressure, and this finding leads to mistakes in diagnosis when the examination is limited to one area and is incomplete. The leucocyte count is normal and there is no temperature or rigidity. The patient is nervous about his condition and headaches are often associated with this. This is the type of case which when operated on for right-sided pain develops the same old distress in the appendix or gall bladder area, and is told that he has "adhesions" and at times re-operated on, only to have a recurrence.

The above history and group of symptoms are quite typical of this irritation of the intestinal tract. The symptoms of an acute gall bladder or of an acute appendix are usually rather clear cut so that with the type of abdominal distress, rigidity, leucocyte count, temperature, etc., the diagnosis may be accurately made. However, the diagnosis of abdominal conditions is not always so simple. One must keep all the possibilities in mind from the beginning to the end of the period of observation—in the meantime carrying out procedures which will be of the least risk to the patient.

When a diagnosis has been made of an irritation to the intestinal tract, it would seem logical that some type of therapy which is soothing

in character is indicated. The principles underlying the management would then be to:

First: Stop all cathartics and large enemas;

Second: Explain to patient that immediately following withdrawal of the cathartic there may be no bowel movement for from two to three days and that this is desirable, rather than otherwise.

Third: Supply a diet adequate to produce a normal formed stool. This diet should be rather high in cellulose content but relatively non-irritating from the chemical standpoint.

The bulk necessary to produce a formed stool varies with the individual and no hard and fast rule can be given, but in general two or three coarse vegetables with potatoes once daily will be sufficient. However, at times, such a diet will produce mushy stools, indicating an overstimulation of the colon and the bulk will need to be reduced, or if hard stool results, the bulk will need to be increased. In the latter case, while additions are being made to the diet, a glycerine suppository, a three ounce oil retention enema or a four to six ounce warm water enema may be used to get rid of the hard material.

Fourth: Heat to abdomen, being careful not to produce stimulation by extreme degrees. (The principle of all the treatment being soothing).

Fifth: As to drugs—tincture of belladonna for its relaxing effect.

#### CONCLUSIONS:

There are many other factors to be considered in the production of abdominal distress but I have attempted to bring out only one group and this one firstly, because of its predominance and secondly, because of its response to medical treatment.

The sooner we stop these irritating procedures to the intestinal tract, the fewer patients will turn to Christian Science or to the Chiropractors, because when they turn to them they stop taking their physics and quit worrying about auto-intoxication and begin to live physiologically as far as their gastro-intestinal tracts are concerned.

Coincidentally—because the irritation has been stopped their abdominal distress disappears and the cult has made a new convert.

Finally, much as we owe to our surgical colleagues for the advances in our knowledge of the symptoms and diagnosis of abdominal diseases, please remember that we have twenty-five feet of intestine and only two inches of appendix so let's

give them a place in our differential diagnosis of abdominal distress.

122 South Michigan.

### THE DIAGNOSIS AND TREATMENT OF NON-SPECIFIC ULCERATIVE COLITIS\*

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The early diagnosis of ulcerative colitis offers great difficulty, but its recognition is of paramount importance for successful treatment of this very resistant condition. The non-specific form of ulcerative colitis is very frequently confused with many other intestinal disturbances, and it is only by careful consideration of the clinical picture and exhaustive laboratory study, proctoscopic and x-ray examinations, that an early diagnosis is possible.

In presenting this paper I am using one of our 18 cases as a typical example of the usual clinical picture to illustrate our diagnostic and therapeutic procedures, and also to use this as a basis of a differential diagnosis.

Mrs. K. white, aged 38 years, consulted us on January 11, 1923, complaining of pain in the abdomen, bloody diarrhea, loss of weight, weakness, nervousness and headaches. She stated that in July, 1921, she had attacks of diarrhea followed by periods of constipation. The stools were first watery and soft, but later became hard and firm. After persisting for three months, she was free from symptoms, but the diarrhea reappeared again in July, 1922. This recurrence was more persistent, and the diarrhea lasted three to eleven days, and was followed by constipation for two to three days. The necessity of catharsis caused a reappearance of the diarrhea.

At the time of consulting us bright red blood and mucus were noted in the stools. The pain was severe and cramp-like, with tenesmus. A bowel movement brought temporary relief, leaving a dull sore ache in the abdomen. The pain at times was so sharp that it made her cry out. It was situated apparently along the course of the colon. There was no nausea and no vomiting. Food eaten seemed to pass immediately onward and aggravated the diarrhea. She had lost twenty pounds in six months. She was very weak and was fatigued by the least exertion. Headaches, vertex and occipital in type, were frequent and lasted twelve to twenty-four hours. She was very nervous, easily excited and perspired easily. There was no cough, nor night sweats, but she felt flushed at times. There was some palpitation. There was no shortness

\*Read before the Section on Medicine, Illinois State Medical Society, Champaign, May 18, 1926.



of breath. Her appetite was fair and there was no nocturia.

Her husband was living and well. She was married 11 years, she had three children, two living and well, one died in infancy of unknown cause. She had had no miscarriages. There was no family history of carcinoma, tuberculosis or diabetes. Her menstrual history was normal, but of late it was scanty and irregular, and had been absent for three months. She had had measles, frequent sore throats without rheumatism, and pneumonia and pleurisy of six weeks' duration as a girl. She had had a hemorrhoidectomy some years ago, but otherwise no operations. She was active, slept fairly well, drank coffee to excess, and occasionally used wines.

The physical examination revealed a well developed but somewhat emaciated white female, about 40 years of age. Her temperature was 99.2, pulse 110, and respirations 24. She appeared pale, as noted, especially in the conjunctivae and mucous membranes. The eyes reacted normally, but had slight extrinsic muscle weakness. There were some carious teeth; the tonsils were enlarged and hypertrophied. The tongue showed no evidence of marginal atrophy. The thyroid gland was moderately and uniformly enlarged, and the cervical lymph glands showed enlargement. She had a fine tremor of the hands and tongue, and the deep reflexes were increased. The lungs were normal except for a slight lagging of the left side. The heart was slightly enlarged, with a mitral systolic murmur. The blood pressure measured 142 systolic and 80 diastolic. The abdomen was retracted and flaccid, with marked tenderness over the region of the sigmoid, less over the appendiceal and gall bladder regions, and none in the epigastrium. The spleen and liver were not palpable. The extremities were normal, with no demonstrable edema. The vaginal examination was negative.

The urine was essentially negative. The stool was liquid and mushy, containing macroscopic blood and mucus. Microscopically there were numerous pus and red cells, some undigested muscle fibre, fat and starch. Stained smears revealed numerous gram positive cocci in pairs and short chains, with some tendency to form capsules, and, in addition, the normal flora was present. There was no evidence of amebae in fresh, warm stools nor in stained smears. Likewise, there was no evidence of tubercle bacilli. The isolated cocci fermented all the usual sugars, except that they did not ferment mannite nor inulin. The stomach acids were 20 free and 25 total in the motor meal, with no evidence of retention, and 35 free and 40 total in the Ewald meal, and there was no occult blood in either specimen. The blood count revealed 70 per cent HB (Sahli), 3,200,000 reds, 10,200 whites, with a differential of 25 per cent mono's, 74 per cent poly's, 2 per cent eosin's, 3 per cent tran's, and 1 per cent baso's. The Wassermann test was frankly negative, with three antigens. The agglutination test for all of the main types of B dysentery was negative, and no dysentery organisms were found in the stool. The von Pirquet test was negative, even at the end of 72 hours. Her blood belonged to group 2 of the Jansky classification (a

procedure which we consider of great importance in event transfusion may be required).

Proctoscopic examination showed a diffuse inflammation of the rectum. The mucous membrane was hyperemic, edematous and bled easily. There was a seropurulent exudate, and shallow, irregular ulcers, which seemed to coalesce, appeared higher up. There was no evidence of stricture formation. The microscopic examination of excised tissue was as follows: Sections taken through the rectal tissue revealed an intact mucous membrane except in a few areas, in which there was superficial ulceration. There was a diffuse infiltration of the polymorphonuclear leucocytes throughout the mucosa and submucosa. The epithelium lining the glands was well defined, and did not suggest a malignant change. In addition, there was a diffuse infiltration of eosinophiles in the mucosa. There was no evidence of similar cells in the muscularis. There was no evidence of malignancy or of tuberculosis.

The x-ray examination of the chest revealed the left complementary space partially closed, the right lower lobe hazy, but the lungs otherwise were negative. The heart was slightly widened in the transverse diameter, the stomach and duodenal bulb were normal. The 12-hour barium meal showed a moderately spastic bowel, especially over the sigmoid region, which was markedly tender. No tenderness was elicited over the appendiceal or gall bladder regions. Observation at the end of twenty-four hours revealed an almost completely emptied bowel. With the barium enema the rectum was highly spastic, with no definite evidence of a filling defect. The sigmoid was smooth and rope-like, the rest of the bowel filled out well, including the cecum. There was an incompetency of the ileo cecal valve, and rapid surging was noted. Plates confirmed the fluoroscopic observation, showing absence of the haustral markings, with irregularities of the walls of the sigmoid and rectum, giving a "moth eaten" appearance. There was no evidence of stricture formation.

The laboratory tests excluded bacillary dysentery because of the absence of specific agglutination and organisms. The absence of amebae on repeated search helped to rule out amebic dysentery. The extent and type of the lesions were incompatible with a malignancy. The negative Wassermann in the presence of active lesions excluded syphilis. The lack of involvement of the cecum and the microscopic tests excluded a tuberculous ulceration. Likewise, actinomycosis was ruled out. The presence of free HCL in the gastric content and the secondary anemia with no changes in the red cells excluded pernicious anemia. Therefore, a diagnosis of non-specific ulcerative colitis was made with the above findings, and because of the clinical picture with the pathology beginning in the rectum or lower sigmoid and spreading upward. The disease may involve the entire colon. Often the bowel wall

becomes infiltrated with scar tissue, and is greatly thickened, resulting in permanent narrowing with entire loss of haustration, and the development of localized strictures. There may be an active lesion in one part and less active in others, and spasm and true stricture may be present in the same patient.

In the treatment of so obstinate a disease, some essential factors must be borne in mind. First and foremost, foci of infections must be eradicated. Barger has recently shown that typical lesions resembling those seen in ulcerative colitis can be reproduced in rabbits, with injections of cultures made from abscesses of teeth and exudate from tonsils taken from patients suffering with this disease. In our experience we have not seen a single recurrence after removal of foci of infection. Secondly, a patient must be given a high caloric diet. Two main ideas dominate the choice of diet, namely, the avoidance of cellulose bearing fruits and vegetables that encourage intestinal activity, and the avoidance of foods which may give rise to intestinal flatulence. As a rule one sees no disadvantage from a general, rather full diet. It is necessary to withdraw raw fruits and green cellulose vegetables, particularly the skin and core of fruits. Pureed vegetables and stewed fruits are recommended. Orange juice and lemon juice are not contraindicated and are even beneficial. If "gas pains" are troublesome, it may be desirable to reduce the intake of milk, for milk, in some patients, gives rise to intestinal flatulence. Similarly, one may restrict the intake of excessive amounts of carbohydrates in the form of starchy tubers (potatoes and squash) of fresh bread and vegetables. The necessity of restricting carbohydrates has been emphasized by Ad. Schmidt; he aims particularly to exclude the more poorly digested vegetable starches. No one steadfast rule can be given as to the exact diet, because the individual peculiarities of the patient must be taken into account; but in general the diet should be one containing all the food factors as well as the vitamin containing substance. Some milk is always desirable, heated and unheated, because it is an ideal food, but in cases of marked tympanites, excessive quantities of it and other carbohydrates should be eliminated. Care must be taken not to limit the diet too much, as has been observed by Crohn and others. Xeroph-

thalmia has resulted from the deficiency of fat soluble vitamin A from the dietary regimen.

The total caloric intake should more than supply the patient's need. It must be remembered that in this disease there is a very rapid peristaltic action, which interferes with digestion and does not allow time for absorption. Hence the rapid loss in weight. The feedings should be frequent and of small amount, with enough fluids to compensate for the marked excretion of fluids.

Thirdly, there is necessity for physiological rest of the bowel. This is accomplished by a non-residue diet as indicated, and by putting the patient to bed. Some workers believe it is not essential, but we believe in the acute stage or in the exacerbation of a chronic stage, it is necessary. The patient should have heat applied to the abdomen, in form of stupes or Priesnitz compresses. These give at times great relief to the patient. Baking, in the form of electric appliances, directed over the course of the colon, has been used. These measures give at times symptomatic relief.

Finally, the medical treatment is of definite value. I will divide this into two stages. First, the treatment of the active stage, and second, the treatment of the inactive stage.

In the active stage we have used bismuth subcarbonate and kaolin in large doses by mouth. These cause an amelioration of the diarrhea with relief from the constant urge to go to stool. If the symptoms still persist, opiates are resorted to. Care must be taken not to check the diarrhea too suddenly, because undesirable gas pains and tympanites arise, and the patient may prefer the urgency of the frequent movements rather than suffer the abdominal colic. The opiates are the best sedative for intestinal peristalses, and when used in the form of the tincture, in small doses, it diminishes without halting the intestinal motility, and thus avoids the undesirable "gas pains." Logan has shown that tincture of iodine in ten m. doses three times a day has had beneficial and curative value.

In our experience *B acidophilus* has been of distinct value, either given in the form of milk or pure culture, or, as we shall later mention, in the form of intestinal implantation. If one can procure a viable and stable culture, this organism is an important factor in inhibiting the growth of other organisms. We aim to have the stool



flora 60-80% positive for bacillus acidophilus. Occasionally acidophilus milk may be too laxative, then the broth culture itself should be substituted. We give 6-8 ounces of the milk three times a day, one-half to one hour before the three main meals, thus avoiding the action of gastric secretion at the height of digestion. By frequent cultures and smears we are very careful to note continually the changes in the flora. We have had a large experience with these organisms in this and other bowel and systemic disturbances, and consider it of distinct value. The culture must not be too acid, and not too old, to ensure proper therapeutic results.

Locally, our treatment is divided into two parts; topical applications and general irrigation of the whole bowel. Innumerable drugs have been used and advised, such as silver salts, permanganate of potash, zinc sulphate, iodine, mercurochrome, etc. Each one has its ardent enthusiast. One must not forget that anything that is in sufficient concentration to be bactericidal may cause so great a local reaction as to make it undesirable and irritating rather than healing.

Of late we have been using neutral acriflavine with beneficial results. We formerly used chlorizine in very high dilutions, with good results. We have also noted beneficial results from col-lene, a proprietary colloidal silver. But neutral acriflavine in aqueous solution has given us our most lasting results. It is non-toxic and has a rapid diffusibility and permeability. Crohn has reported definite results with it. We begin with a 1-4000 dilution, as a retention enema, using 500-700 c. c. two times a day. The patient lies on his left side, thus allowing contact of the diseased area with the solution. Later, as the symptoms abate, as they usually do, towards the end of the first week or beginning of the second, we reduce the irrigation to once a day and increase the strength of the solution to 1-3500, and later to 1-3000. If there is an excess of mucus then we may have to resort to less frequent irrigations and weaker solutions. When the temperature is normal, and the diarrhea less, the irrigations are given on alternate days. This treatment is continued until the diarrhea has ceased. Then weak soda bicarbonate (0.5%) irrigations are used on intervening days, the weak alkali tending to increase the antiseptic action of the dye. This treatment is continued until frequent proctoscopic and sigmoid-

oscopic examinations clearly indicate the disappearance of all the ulcerative lesions and a return to normal. Occasionally scarring and stricture formation occur in the rectum and anus, but they are rare in the large bowel. The acute cases subside in a few weeks, the chronic ones are more protracted. Finally, the patient returns for ambulatory treatment at the office, with a special irrigation apparatus, which allows the passage of a long tube completely throughout the whole bowel, up to the cecum. In this manner all of the pockets are cleaned and irrigated, various antiseptic solutions instilled and implantations made of the acidophilus bacillus up to and near the cecum. This is kept up until we are reasonably certain the case is cured, and the patient reports back at infrequent intervals for observation and irrigations.

Bargen of Rochester has recently reported a group of cases in which there has been 80% improvement in the symptoms of patients suffering from ulcerative colitis. His method of therapy consists of giving increasing doses of a vaccine of Berkefeldt filtrate. By this method he has been able to show definite improvement both clinically and pathologically in his cases of ulcerative colitis. I have tried this method out in three cases during the course of the last year, and have found it very beneficial. A longer period of time must necessarily elapse before any definite conclusions can be drawn as to its efficacy, but through personal observation of both Bargen's results and my own, I feel that this vaccine filtrate therapy may offer great possibilities.

In 1921, Dr. Arthur Hurst suggested that anti-dysenteric serum might have, even in this non-specific form, some therapeutic value. He had used the serum intravenously in large doses (40-100 c. c.) in two cases, and reported rather striking results in both cases.

Einhorn tries to avoid operation by the use of the joined intestinal tube. When the tube reaches the cecum, it is left in place for two or three weeks, and is used merely for the purpose of treatment. Nutrition takes place by mouth in the usual way.

We have used in cases where there was slight agglutination for any one of the B dysenteriae organisms, mixed vaccines of the three common types, in addition to the other therapy. We have also given cases hypodermic injections of emetine hydrochloride from grains  $\frac{3}{4}$  to grains  $1\frac{1}{2}$ ,

daily for seven to ten days, purely empirically; but these methods have only been used where the patient has not done well under the former management. We have now treated eighteen cases; the oldest case is 61½ years, and the latest is six months. In all but one case there has been complete recovery, and in this the patient was unable to stay in the city to carry out the course of treatment. She has been following our treatment under another physician, and the last report from her stated that she was up and about, and following out her normal routine of life.

It is very gratifying to observe the improvement in the clinical picture of these patients, and to see the ameliorations of symptoms and their ability to assume their normal routine duties of life.

If the case is a long and protracted one, that is, averaging from six months to many years, the results may be less striking. If, after thorough medical management there is no improvement, surgery must and should be resorted to. The cases that usually go to operation are, as a rule, poor surgical risks. If a patient, after a fair and impartial trial, has not improved, surgery should be resorted to without too long a delay. The fatal results from surgery have been due to the poor condition of the patient, due to the procrastination of the medical men.

Of the surgical procedures, appendicostomy is the simplest. This is used by most men for irrigation. Results with it are usually not satisfactory, and it is inefficient in the treatment of the severe cases. The greatest factor in ameliorating the symptoms of these severe case lies in shunting off the intestinal current from the diseased bowel. Flushing out the bowel through the appendicostomy is helpful, but absolute rest for the colon and prevention of contractions, peristalsis and irritation are of more importance, and can be accomplished only by ileostomy. Blood transfusions and glucose intravenously frequently have to be used to build up the patients who are usually markedly weakened, cachectic, dehydrated and anemic.

A certain proportion of the patients are not markedly benefitted by ileostomy, for after a slight improvement they come to a standstill. Discharge of pus and blood from the rectum continues to some extent with chills, and fever occurs at varying intervals. Arthritis of varying

severity may be present, due to absorption from the colon, and a mild degree of chronic sepsis may persist. Something else must be done for these patients. An ileo sigmoidostomy is helpful in cases involving the transverse colon, with no involvement of sigmoid and rectum, and as a last resort, a partial or total colectomy is advisable.

#### DISCUSSION ON PAPERS OF DRS. LAING AND PORTIS

Dr. James Mason, Urbana: After listening to so perfect a paper that has gone so exhaustively and scientifically into the subject, I shall certainly not take much of your time.

It has been a great pleasure for me to listen to this paper by Dr. Portis. He has discussed a subject old in the annals of medicine, one in which the internist and abdominal surgeon and the specialist must always be on the lookout.

To many of us he has handled it in a new way. To others it is the old wine in a new vessel. To me absolute rest, fresh air, sunlight, diet, local and topical applications properly selected, are the basis for rational treatment.

Dr. Portis' paper is an eloquent rebuke to that method of treating cases that many of us drop into that is parrot-like in nature. In our chronic forms of trouble we are apt to develop some rather skillful line of treatment and follow it and get into a rut. His paper is a very eloquent rebuke to such sort of treatment. I am very sorry to say that some people are prone to take this form of treatment in the chronic forms of trouble.

In the matter of diagnosis in some patients especially, I would like to mention a feature about this sort of trouble that is sometimes noticed. There is a syndrome of nervous symptoms quite often noticed in women patients. There is a sympathetic condition of the colon which causes this, not so much in the ulcerated type as is true in the mucous colitis.

As was said by one eminent writer on this subject, a woman who had a colitis of this type could count herself lucky if she was not subjected to one or more abdominal sections for tubal or ovarian or uterine trouble.

The treatment mentioned by the essayist I have not used. I am certain of its efficacy and I shall be very glad indeed to make use of it in work of this sort. The method is to use agents which will cleanse the bowel, the mineral oils, the use of an agent that cleanses from below and then follow by an installation of either plain olive oil or any type of bland oil. But I think better still have been my results when I have incorporated one or two per cent ichthyol in this oil.

This line of treatment has to be persisted in for a long time. The patient may think after six weeks or two months that they are still only to have a recurrence of their trouble after some months of the same diarrhea with the bloody stools. Whatever line of treatment is adopted we must remember that we are



dealing with ulcer, an ulcer that is a back lash of some sort of systemic disturbance.

The thing I want to stress most in the discussion of this paper is the excellence of the points brought out in the local handling of the ulcer. The surgery of this type of case to my mind should be left, as the essayist said, as a last resort. If you do a colotomy you may cure your ulcer but you may have an artificial anus, which is not so simple after all.

Dr. Sidney A. Portis, Chicago (closing): I am sorry that I did not have time to enlarge on several points in my paper, but this will appear in the printed paper.

We have had no experience at all with the use of oil in the treatment of ulcerative colitis. We have found that the use of ichthyol is very irritating to the bowel, and because of this irritation, even when mixed with oil, we have ceased to use it. I think that the reason that many patients die from ulcerative colitis is due to the fact that all of us do not realize we are dealing with a patient who is very sick. This disease is comparable in its later stages to a marked thyrotoxicosis. The patient has to be watched at all times, and as I have previously said, suitable donor or donors should always protect the patient. Intravenous blood and medication should be resorted to at the first ominous sign. These are very often life-saving measures.

I want to thank the doctor for his very kind and thorough discussion of this paper.

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## RADIUM IN UTERINE HEMORRHAGE AND FIBROIDS\*

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Probably the greatest field of usefulness for radium therapy today is in gynecology. The several pathologic conditions of the uterus to which radium can be applied with marked success are hemorrhage (types given below), fibroids, endocervicitis and carcinoma.

Any competent physician with the aid and advice of an experienced radium therapist can personally apply radium in the majority of uterine conditions amenable to radium treatment. There is nothing mysterious or difficult in the method or manner of making the radium applications. The necessary requirements are accurate gynecological diagnosis, surgical cleanliness and a careful interpretation and application of definite instructions. Hundreds of general practitioners have applied radium suc-

cessfully in uterine conditions with very satisfactory results. Radium is, however, an extremely powerful substance and much harm could be wrought if improperly used. Physicians should attempt its application only when directed by an experienced radium therapist.

*Indications for Radium.* The success of radium therapy in uterine diseases, like every other form of therapy, depends primarily upon an accurate diagnosis being established. A careful gynecological examination should first be made in order to ascertain correctly the pathology present and the condition of the adjacent parts.

Radium is indicated in the great majority of cases of non-malignant uterine bleeding (menorrhagia and metrorrhagia) with the exception, as a rule, of those due to abortion or pelvic inflammation. Bleeding from non-malignant growths, fibroids, and from so-called "uterine insufficiency" (myopathic, idiopathic, simple or essential hemorrhage) forms a large class in which radium is of great benefit. In cases of menopausal or pre-menopausal menorrhagia, in which no pelvic pathology is demonstrable, radium is particularly effective. Radium is indicated in chronic metritis, uterine fibrosis and subinvolution, all of which have much in common. It is the ideal treatment in cases of small multiple fibroids with severe hemorrhage.

*Contra-indications for Radium.* Large doses of radium are contra-indicated in women under forty (40) years of age. In young women, non-radiation methods are preferable, and when impossible, *small* doses of radium are frequently effective, but should be applied with the *utmost* care. (Puberty hemorrhage is a definite indication for radium and can invariably be controlled by such treatment.) Radium should not be used when any acute pelvic inflammation is present. Surgery is indicated in definitely pedunculated fibroids, very large fibroids (size of 5 months' pregnancy), and when associated pelvic pathology is present, but these patients can usually be rayed with benefit, if operation is impossible.

### TECHNIQUE OF RADIUM APPLICATION

The technique of applying radium in the uterus is comparatively simple. We prefer an applicator which consists of a piece of rubber tubing with a blind end, and inclose the brass capsule,

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containing the radium in this end of the tubing. A short cross-arm rubber piece is placed on the applicator (Fig. 1) and fits snugly against the cervix when the portion containing the radium is introduced into the body of the uterus. (Fig. 2.) When gauze is packed against the cross-arm rubber piece it will hold in position. This does away with the necessity of stitching the applica-



Fig. 1. This illustrates a typical radium applicator for use in the body of the uterus. It is a piece of rubber tubing the thickness of a lead pencil and the radium, inclosed in a brass capsule, is tied in position in the end of the tubing. The cross-arm piece fits against the cervix and holds the tubing in position when gauze is packed against it.

tor to the cervix to maintain its position. The applicator is semi-rigid, due to the fact that there is a heavy wire attached to the capsule containing the radium (inside of rubber tubing). This greatly facilitates ready insertion of the radium and at the same time permits the applicator to be bent to conform to the direction of the uterine canal.

The patient is given several thorough cleansing enemas and a douche. Following this the cervix is dilated sufficiently to introduce, under aseptic precautions, the radium applicator. A little K-Y jelly placed on the end of the applicator will facilitate ready insertion. It is well

to determine the length of the uterine canal by means of a sound and adjust the cross-arm piece on the applicator so that when the radium is in the *body* of the uterus, the cross-arm rubber piece fits snugly against the cervix. Following this, the entire vagina, including the anterior and posterior fornix, is packed with gauze. This is done carefully, the purpose being to keep the radium in position while holding the bladder and



Fig. 2. This illustrates how the radium applicator appears when properly placed in the uterus in patients with uterine hemorrhage, fibroids or carcinoma of body of uterus. The applicator is maintained in correct position by voluminous gauze packing.

rectum away. These parts are quite sensitive to radiation. If the packing is thoroughly done it requires about ten yards of two-inch gauze. The patient is kept in bed the *entire* time and catheterized every six hours if unable to void. The duration of the treatment depends upon the amount of radium used, the age of the patient and the pathologic condition treated.

The patient, as a rule, is permitted to be up at the conclusion of the radium treatment unless the bleeding is profuse. A simple non-irritating vaginal douche (daily) is advised for about a month after the treatment.

If it is thought desirable, a curettement may precede the radium insertion. In women over



35 years of age this should be done as a diagnostic measure to rule out the possibility of malignancy as the cause of hemorrhage.

*Dosage Depends on Age of Patient.* One of the most important points in the treatment of uterine conditions with radium is the proper dosage. Large doses of radium are practically certain to influence the ovaries causing sterility and early menopause. To protect a patient from permanent sterilization, 500 milligram hours of radiation is considered the maximum exposure. (This dosage is obtained with 50 milligrams of radium applied 10 hours, or 25 milligrams for 20 hours.)

When the patient is *under* forty (40) years of age, the dosage applied must be small (500 milligram hours or less), in order that the menstrual function with the resulting ovarian secretion be preserved.

If the patient is forty (40) years or more, the preservation of menstruation is no longer a serious consideration and much larger doses are permitted. In the majority of these patients the production of the menopause, with complete cessation of all uterine bleeding, is the desired effect. This is usually accomplished by an application of 1200 milligram hours (50 milligrams of radium for 24 hours) which is considered a castrating or sterilizing dose.

The above dosage is recommended in patients with non-malignant uterine bleeding and fibroids. When a malignancy is present much larger doses are required to control the condition (2400 to 3000 milligram hours).

#### RESULTS OF RADIATION

When the smaller doses of radium are administered to women under forty years of age, the results are not so certain as those obtained by the larger doses applied to older women. In the first mentioned group, at least half are controlled by one treatment, the remainder requiring one or more additional treatments. If radium is used shortly before the expected menstrual period, the bleeding may be more profuse than usual and the next two or three periods absent. Six (6) weeks or more should elapse before an additional treatment is considered.

In women forty (40) years of age or more, the results from radium treatment are extremely gratifying. About 90% will be completely re-

lieved with one application\* of the so-called sterilizing dose. A small percentage will require a second treatment, but this should not be considered until at least eight (8) weeks have elapsed. Patients that do not respond to two or three sterilizing doses of radium should be regarded as suspicious of malignancy.

Nausea is sometimes present during the time the radium remains in the uterus, but usually disappears within a few hours after removal.

Hemorrhage is either relieved immediately after treatment or gradually diminishes and stops entirely in about a month. In some patients the menstrual period which follows the treatment may be even more profuse, due to the congestion attendant upon the radium application. When large doses of radium are used, one or two menstrual periods may occur before complete amenorrhea takes place. A watery discharge or persistent leucorrhea may appear for some weeks after treatment. This is caused by the local reaction of the radium, and gradually subsides. It is usually so insignificant that, unless the patient's attention is called to it, she makes no complaint. There is a gratifying sequel—a persistent leucorrhea is frequently cured by the treatment.

In fibroids, the reduction in size depends upon the structure of the tumor. If the growth is chiefly fibromatous, only a slight reduction may be anticipated. If it is chiefly myomatous, (most common type) definite shrinking is observed—nearly half the size in three months and in six months, small growths will scarcely be palpable and larger ones are further reduced but produce no symptoms. If a fibroid does not recede, calcification or marked fibrosis should be suspected. It is well known that fibroids rarely, if ever, increase in size after the menopause has been established. Therefore, in patients past the child-bearing age and nearing their climateric, a premature induction of the menopause can invariably be accomplished by radium application.

Fibroid patients should be examined at monthly intervals and as long as the progress is satisfying further treatment is unnecessary. If conditions are not clearing as rapidly as is thought advisable a second treatment can be given in two months. In patients that have been depleted by excessive hemorrhage, radium may be employed to check this symptom. Then the

patient can be operated on in one or two months if such a procedure is desired.

#### RADIUM VERSUS SURGERY

Radium should not be looked upon as a competitor of surgery in gynecology. The best proof of this is the fact that it is constantly being used and is the method of choice of many of the foremost surgeons and gynecologists, in certain uterine conditions. It is far better that both radium and surgery be regarded as useful methods in the cure of certain uterine conditions and intelligent selection, based upon careful consideration of the peculiarities of each case, should determine which is to be used.

Radium is one of the most valuable additions to the gynecologists' armamentarium today. It has enabled him to manage without operation a large percentage of uterine diseases. It is usually much easier to persuade a patient to submit to a simple procedure such as the application of radium, than to gain her consent to undergo a major operation. Many women, from fear of the knife, suffer from some type of uterine condition and postpone consulting a physician until wrecked mentally and physically. With a better understanding of the wider use of radium, fewer women will be ordered to a hospital for what is considered a serious operation. The knowledge that a simple radium application will offer relief, where a mutilating operation was indicated only a few years ago, should make women anxious to consult physicians early.

The advantages of using radium in these patients compared to surgery are:

1. There is no operative mortality.
2. Usually, a general anesthetic is unnecessary, hence there is no shock.
3. Properly applied, there is no infection or hemorrhage nor other post-operative complications.
4. The patient is not confined to the hospital for a long period of convalescence.
5. Should radium fail, operation is always possible.
6. The menopause symptoms are not so marked. (Menopause only occurs when large doses of radium are given.)
7. Radium can be used when surgery is feared, as when heart disease, extreme anemia, tuberculosis, diabetes, or chronic nephritis exist as a complication.

#### CASE REPORTS

The following briefly reported case reports are typical of the results secured from radium in these conditions:

##### Case 1. *Uterine Hemorrhage from Probable Fibroids.*

Age 45; married; heart lesion with dilatation; hemoglobin 70 per cent.; very neurotic; urine, no albumin or casts; Sp. gr. 1012; blood pressure 160-65; bimanual examination shows moderate uterine enlargement with retroversion and adherent to left side with no palpable mass on either side. History of menses every two weeks for one year, soiling 15 or more napkins each day for 4 or 5 days and less for balance of week.

Fifty (50) milligrams of radium was used for 24 hours. The patient menstruated lightly twice after the treatment, after which complete amenorrhea occurred. In two months she had gained 12 pounds and was much stronger. Eight months after treatment the uterus appeared normal in size, the patient having gained 20 pounds. She had completely regained her health. When last seen 13 months after the radium treatment she was enjoying good health, menstruation was still absent and she was "very well satisfied."

##### Case 2. *Menopausal Menorrhagia.*

Age 45; had never been married, had been in ordinary menopause for two years. For nine weeks had been flowing constantly. Vaginal examination possible with child's speculum. Hymen unruptured. Clots in vagina; cervix slightly enlarged; redundant mucous membrane protruded from cervical canal. The body of the uterus was somewhat enlarged and very much retroverted. Mother died of cancer.

Fifty (50) milligrams of radium was used in this patient for 24 hours. This resulted in complete amenorrhea. Six months following the treatment the cervix was absolutely normal, being firm and normal in color. The adjacent parts were normal. The patient was gaining in weight and her general condition splendid. Nearly two years after the treatment, and when last seen, the patient was still entirely recovered and had no flow of any kind.

#### SUMMARY

Radium therapy is without doubt the treatment of election in a large percentage of cases of uterine bleeding and fibroids. Instead of allowing patients, in need of this special therapy, to drift or delay, the family physician today is either administering the radium himself (under supervision of an experienced radium therapist) or is promptly directing his patient to a qualified specialist. The technique of radium application in gynecology is simple and can be satisfactorily handled in the majority of instances by the general practitioner. Many of these treatments can be given in the patient's home (if necessary) without an anesthetic. Therefore ethical



physicians can (in locations where competent radium therapists are unavailable) introduce the use of radium into their professional work and, under proper supervision, apply radium in many conditions amenable to radium therapy.

731 Hampshire St.

## NEWER KNOWLEDGE CONCERNING NEPHRITIS\*

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The term "nephritis" is in a way a misnomer, because the conditions referred to under that name are essentially general diseases affecting the entire body as well as the kidneys. Nephritis is not a single disease. There are a number of forms which differ so completely in their etiology, pathology, symptomatology and treatment, as to constitute separate and distinct diseases. During adult life mixed forms occur, but during childhood nephropathies occur in simple and clear cut form, and can be studied readily before complications have developed which obscure the clinical picture.

In this paper, I wish to summarize briefly the results of an intensive study of the different forms of nephritis, which have been carried out during the past few years at the St. Louis Children's Hospital. The two common forms of nephritis will be considered: 1, parenchymatous or tubular, in which there is an alteration of the physical chemistry of the body and a change in the permeability of the cells; and 2, glomerular or hemorrhagic nephritis in which there occurs damage to the smaller capillaries throughout the body. Both of these forms of nephritis are due primarily to infection, and both are progressive so long as the infectious cause remains. With removal of the infection, complete recovery from parenchymatous nephritis may occur and the further progress of hemorrhagic nephritis may be arrested.

### PARENCHYMATOUS NEPHRITIS •

The symptoms of parenchymatous nephritis come on insidiously. There may be a history of chronic rhinopharyngeal infection with an acute exacerbation preceding the onset. Edema develops gradually and ultimately becomes general

and marked. At the same time, the urine decreases in amount, becomes dark colored and of high specific gravity. Large amounts of albumin and casts are present but *no blood*. Chlorides are diminished or absent from the urine.

A secondary anemia rapidly develops. Not only are the red blood corpuscles and the hemoglobin of the blood low, but the serum protein and blood volume diminish. The chorides of the blood plasma are lower than normal. There is no elevation of the blood pressure and no changes in the eye grounds or in the capillaries of the body. Phenolsulphonaphthalein excretion is approximately normal. Neither acidosis nor true uremia occurs.

Pathologically the kidneys are large and white. Microscopically there is a degeneration of the cells of the renal tubules without changes in the glomeruli or interstitial tissues.

The changes occurring in the kidneys are not in themselves sufficient to account for the symptoms observed. There is, as a matter of fact, no true renal insufficiency. On the other hand, removal of both kidneys fails to lead to the characteristic symptoms of parenchymatous nephritis. There is evidence of widespread changes throughout the body independent of the renal changes. There is retention of fluids and salts in the tissues to an abnormal degree. The salts and fluids are removed from the body by the tissues and not held back by the kidneys. The kidneys still retain the power of excreting fluids and salts. If a tourniquet is placed around the arm of a patient with parenchymatous nephritis, fluids pass out of the blood and into the tissues, whereas, in normal individuals the passage of fluids is in the opposite direction. There seems to be a general change in permeability of vessel walls and cells.

It has been shown by Clausen, working in our clinic, that there exists in the blood of these patients a substance capable of changing the surface tension of the blood and leading to changes in permeability. This substance was found in all cases of parenchymatous nephritis, both in the blood and in the urine. The substance in question not only changes the permeability of blood vessels, but also that of the renal tubules, so that albumin pours through from the blood into the urine. The substance in question may be readily detected by the simple method of determining the surface tension by weighing a

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number of drops of serum falling from a special pipette.

The next question which arises is as to the origin of this peculiar substance in the blood. In our series of cases, infection has been invariably present and with subsidence of the infection the active substance has disappeared from the blood and urine and at the same time the edema and other symptoms of nephritis have also subsided. The most common location of the infections has been in the nasal accessory sinuses, especially in the maxillary antra. The infecting organism has usually been a hemolytic staphylococcus. The evidences of infection have not always been apparent. There may have been no fever and only an indefinite history of head colds or mucopurulent nasal discharge. In some cases, without symptoms of local infection, roentgenograms have revealed clouding of one or both antra and in other cases the diagnosis has been made only after antral irrigation.

On draining such infected areas, there has usually been a prompt remission of the symptoms of nephritis and, in cases which the foci were entirely cleared up and no reinfection occurred, there has been a complete restoration of normal conditions in the body. The edema has disappeared and the urine has become normal in character. In cases which we have followed for a number of years, there has remained no demonstrable evidence of nephritis. Reinfection, however, is likely to bring about the recurrence of all the symptoms.

In a few instances we have observed parenchymatous nephritis to occur as a result of staphylococcus infection elsewhere in the body, than in the nasal accessory sinuses. We have observed it following osteomyelitis and staphylococcus skin infections. It is our belief that infection leads to the production of the toxic substance which in turn damages the cells throughout the body, including those of the renal tubules. Treatment in any case should therefore first be directed to the source of infection; for, if this is not treated, other therapeutic measures will offer no more than temporary symptomatic relief. Water restriction, purging and a low protein diet lower the resistance to infection and accomplish nothing so far as a cure of the condition is concerned.

The diet of these patients should be one rela-

tively high in proteins, as there has been much loss of albumin by way of the urine and the patients are invariably anemic. Children should have  $2\frac{1}{2}$  to  $3\frac{1}{2}$  grams of protein per kilo of body weight per day, adults from 2 to 3 grams. The total food intake should be from 60 to 80 calories per kilo. Salts should be moderately restricted but water need not be restricted, unless the edema and ascites are so great as to interfere with respiration and cardiac action. Neither sweating nor purgation are of benefit. Blood transfusions are of distinct value in restoring lost proteins and in correcting the anemia. Diuretics of the purin series (e. g. theobromin sodium salicylate) raise the surface tension of the blood and in this way counteract the effect of the toxic substance and so decrease the edema. These diuretics apparently do no harm, but are not of great value unless the infectious cause of the condition is removed. In many acute infections there occurs a mild degree of parenchymatous nephritis, the so-called "febrile albuminuria." A similar condition is brought about by various intoxications due to proteose, heavy metals or toxemia of pregnancy, but the type described above is by far the most common.

#### HEMORRHAGIC OR GLOMERULAR NEPHRITIS

Hemorrhagic or glomerular nephritis is an entirely different disease from parenchymatous or tubular nephritis.

The symptoms begin abruptly, following an acute streptococcus infection. The patient is prostrated and there may be definite uremic symptoms. Edema is slight. There may be a temporary suppression of the urine at the onset, or there may be a profuse diuresis. After the first few days, however, the volume of the urine is within normal limits. The urine is "smoky" due to the presence of red blood cells. Later the blood cells may be found only microscopically. A moderate amount of albumin and a few granular casts are present. There is very little anemia at the onset. The volume of the blood and the serum protein are not decreased and there is no change in the surface tension of the blood. The blood pressure is elevated in most instances and may be very high. Non-protein nitrogen and urea are retained in the blood and there is a decreased excretion of phenolsulphonphthalein. Acidosis and uremia are of frequent occurrence. There are changes in the capillaries of the eye



grounds and also in the capillaries of the rest of the body.

The condition seems to be one of general capillary damage, not only of the renal glomeruli, but of the systemic capillaries brought about as the result of a streptococcus infection.

The changes in the capillaries of the body may be readily observed during life, if one examines the capillary tufts at the bottom of the finger nail bed. This is done by moistening the skin with glycerine and examining under the low power of the microscope in a beam of direct light from an arc of a small dark field illuminator. In the presence of hemorrhagic nephritis, the capillaries are tortuous, the arterial limbs are constricted and the venous limbs dilated. The changes are so characteristic, that one may diagnose hemorrhagic nephritis with a fair degree of certainty upon these appearances alone.

In the kidneys, at autopsy, there is seen evidence of extensive damage to the capillary tufts in the glomeruli. In advanced cases, the glomeruli may be practically obliterated. It is these changes in the glomeruli which make it possible for red blood cells to pass through into the urine and which also bring about the functional incapacity of the kidneys to eliminate waste products. The increased blood pressure may well be due to the general capillary constriction throughout the body. The other symptoms, such as edema and acidosis, can also be explained on the basis of capillary injury, either in the kidney or elsewhere.

As mentioned, hemorrhagic nephritis is the result of infection with a toxin producing streptococcus. The infection may be anywhere in the body, but is particularly likely to occur in the nose and throat, more frequently in the tonsils, adenoids and pharynx than in the nasal accessory sinuses. In chronic cases, the infection may be at the roots of the teeth.

In many instances, the acute infection is self-limited and the symptoms of nephritis gradually subside. It is probable that in all these cases there is some permanent damage to the capillaries but this may not be sufficient to lead to any general impairment of the health. In other instances, however, when the infection is more severe or of long duration, the permanent damage may be so great as to lead to a condition of permanent hypertension and renal insufficiency. It seems likely, from our experience, that the

lesions are not progressive provided the foci of infection are completely cleared up, although the damage already done may remain. Hemorrhagic nephritis is the result of infection, but one should be very cautious in attacking the foci of infection during the acute stage. It is only after a subsidence of the more violent symptoms that one should resort to surgical treatment.

In the chronic cases, operative treatment of all possible foci of infection is essential.

In hemorrhagic nephritis the diet must be carefully regulated. When the glomeruli are damaged, a high protein diet is contraindicated. A patient with this disease should receive not more than one or two grams of protein per kilo of body weight per day. In the presence of marked hematuria, the diet should be limited to milk. Later cereals containing very little protein may be added. Arrowroot starch is of especial value, because of its low protein content. Vegetable protein tends to increase the hematuria. In cases in which the hematuria is persistent, the patient should have a "sugar day" once every week or 10 days. On the "sugar day" the patient receives 10 grams of cane sugar per kilo of body weight in 1,000 or 1,500 cc. of fruit juice and nothing else.

It is a great mistake to limit the water intake of patients with hemorrhagic nephritis. The drinking of considerable amounts of water should be encouraged. Salts must, however, be limited. Alkalies and diuretics are especially contraindicated. Phlebotomy followed by transfusions is of value as is also the injection of 20 per cent glucose solution intravenously. This latter finds its greatest use in the presence of impending uremia.

The two types of nephritis described are those most common in early life and if neglected, they may result in the chronic interstitial nephritis of adult life. Both of these varieties of nephritis are the result of infection. Both are general diseases in which the kidney is only one of the organs affected. The treatment of each is the removal of infection. Diet and other therapeutic means are of secondary importance, but in general a high protein diet is indicated in parenchymatous nephritis and a low protein diet in hemorrhagic nephritis.

#### DISCUSSION

Dr. Warren Pearce, Quincy: I should like first to express my appreciation of having the opportunity to

hear such a splendid paper. I am sure we all deem it a privilege to hear Dr. Marriott.

I should like to say a word or two about classification of nephritis. Manifestly in a disease like nephritis it is impossible to have an ideal classification, one in which the pathology, symptoms, etiology, and other factors in the disease are definitely arranged.

The many classifications, resulting from the difficulties encountered in properly classifying the disease has resulted in some confusion in nomenclature. As an example, the term nephrosis is not used by all clinicians in the same sense. Originally used by Mueller to designate only degenerative forms of kidney involvement, especially those due to various poisons; it is now used most often to designate a clinical picture in which there is considerable edema and the urinary findings of nephritis, but with normal blood pressure and very little disturbance of renal function.

The Christian classification, though a clinical one, is of great value, especially because of its simplicity and adaptability.

High protein diet was used by Volhard as well as Munk when they noticed that in lipoid nephrosis the end products of protein metabolism are not increased in the blood and they obtained good results. Epstein went further and used a diet high in protein with almost no fats and very little carbohydrates. The object being to replace the proteins of the blood which are lost by way of the urine and also to compel the organism to utilize the protein of the food by withholding fats and carbohydrates. Elwyn believes the beneficial effects of high protein diet are due to the specific dynamic action of the protein—the stimulation of general metabolism of the cells.

I am sure we all agree with Dr. Marriott in his statement that nephritis is a general disease and not a local one. Rockwood and others of the Mayo Clinic have recently studied fifty-seven cases of nephritis in pregnancy, classifying them by the Volhard method. They conclude that both nephritis and toxemia of pregnancy are general diseases affecting the cardio-renal-vascular system as a whole, and they show that in the cases diagnosed as focal nephritis, benign hypertension, and nephrosis, the patients for the most part recovered with little residual disease, but that the groups diagnosed chronic glomerulo-nephritis, malignant hypertension, and chronic nephritis had a high mortality, the group of chronic glomerulo-nephritis particularly.

Those cases that come under the heading vascular hypertension progressing into nephritis are very important ones. Most of us, I am sure, have encountered young adults in whom, during a routine physical examination, a very high systolic blood pressure had been found. These cases usually feel quite well and the high blood pressure is not suspected. However, they develop into cases of nephritis and should be kept under observation.

Dr. Julius Grinker, Chicago: In the case with albuminuric neuro-retinitis, which Dr. Marriott mentioned as improving, I would like to know whether neuro-retinitis was not considered a point against re-

covery, as we have been taught, and as we have found by experience in adult cases.

When we diagnose albuminuric neuro-retinitis, we expect the patient to die within a year and a half or two years. Is this also true of children and in the acute cases which he described?

Dr. McKim Marriott, St. Louis, Mo. (closing):

I wish to thank Dr. Pearce for his discussion. Cases of hypertension without renal involvement are more common in adults than in children, so my experience with these has been limited. It is possible that there are cases in which the changes in the systemic capillaries are greater than in the renal glomeruli; and that this may be the explanation of hypertension without nephritis.

As to albuminuric retinitis, we consider this as an extremely grave prognostic sign. I have in mind, however, a child who first came to our clinic three years ago in uremic coma with albuminuric retinitis, a high blood pressure and retention of non-protein nitrogen. Foci of infection were cleared up, and the child has been going to school for the past two years and is in reasonably good health. She still has some albumin in the urine and the blood pressure is still slightly elevated but much lower than it was three years ago. According to the ophthalmologist who examined her on admission, the changes in the eye grounds are now less marked than they were three years ago. This was a case of hemorrhagic nephritis of long standing and permanent damage has been done, but not sufficient damage to interfere with fairly normal body functions.

## PAROXYSMAL TACHYCARDIA\*

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CHICAGO

In presenting for your consideration a discussion of paroxysmal tachycardia, I must at the outset disclaim the possession of new material on the subject. It is rather my design to emphasize certain of the clinical aspects of the condition and include some remarks upon the treatment.

Paroxysmal tachycardia is characterized by a very rapid heart rate, which comes on suddenly, persists for a variable period, (minutes to days or weeks), and terminates abruptly. Sudden onset and offset are distinguishing marks of this type of tachycardia.

The paroxysm may begin at any time. Often this occurs at night. The afflicted individual may awaken with a feeling of fear; perhaps he notes the rapid rate as he comes to himself; often he is already fully awake when he notes some irregularity of the heart, a few "hard thumps" as they are frequently described and

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these are followed by the sudden inception of the rapid rate. With the establishment of the new rate, the patient has a sense of tightness in the upper part of the thorax; often this sense of constriction includes the neck.

Much this same sequence of the symptoms of onset is observed in all the paroxysms, whether they occur by day or night. Pain may occur, and in some instances the patients will volunteer the information that there is a pain in the left arm. In general, pain is an unusual symptom and, in the minor attacks, the patients are often conspicuous by their appearance of comfort in spite of the rapid cardiac rate. In the shorter attacks there may be no complaint save of the preliminary irregularity and the tachycardia; usually, however, there is a sense of anxiety; more intelligent patients may tell of a sense of fear which is hard to describe, but impossible to overcome. The onset may be marked by a feeling of faintness, which may go on to actual fainting. With increasing duration of the attack and aggravation of the symptoms the expression becomes more and more anxious. A tinge of cyanosis may be observed early. Dyspnea is not often a common complaint, perhaps due to the fact that these patients instinctively keep quiet. With persistence of the paroxysm both cyanosis and dyspnea, particularly the former may become quite marked. The vessels of the neck show the rapid pulsations. The radial pulse may be so weak that many beats are not felt and the true nature of the paroxysm may be overlooked if the cardiac rate is not counted over the heart itself. The arterial pulsation becomes notably weaker as the duration of the tachycardia increases. In attacks of long duration, cardiac failure supervenes with edema and eventually coma. Death may occur, although it is a rare termination.

In the minor attacks, physical examination reveals only the tachycardia and the slight cyanosis, unless some primary heart disease is present. A systolic murmur may be heard over the entire precordium or at the base alone. Often these are the only physical findings even though a definite valvular lesion has been discovered at a prior examination. The tachycardia may cover the signs of a primary valvular disease. Gallop rhythm is often present. Dilatation of the heart is not common at the onset of the paroxysm. According to Levine and Golden, marked dilatation of the heart is found only in the attacks of

long duration. It may be emphasized that the dilatation of the heart is the result of the tachycardia and not its cause. The systolic pressure falls and the pulse pressure may become very low.

The accepted teaching as to the immediate cause of the onset of an attack of paroxysmal tachycardia is that it is due to the suddenly acquired dominance of an abnormal focus of stimulus production which initiates impulses so rapidly as to entirely supersede the normal pacemaker, the sinus node. The site of origin of these ectopic beats may be in the auricle, the junctional tissue or the ventricle. The auricular type is most common. There has been some discussion as to whether or not paroxysms ever originate from the normal pacemaker; opinion is still divided as to this. Neither are we able to make exact statements as to the relationship which nervous factors or myocardial disease bear to the precipitation of the attacks. We do know that many of the patients whom we see with paroxysmal tachycardia show no signs of cardiac disease, nor do they give a history of prior disease which might warrant a probable explanation for the condition; some of these individuals have definite neurotic stigmata, others have been subjected to emotional or mental strain. In some cases, especially where the paroxysmal attack is one of auricular fibrillation, there is found evidence of hyperthyroidism. A second group of patients will show no signs or symptoms of cardiac disease other than the tachycardia, but will give a history of some form of rheumatic infection which raises in one's mind the question as to the possible presence of a myocarditis. The attacks are fairly common in connection with mitral disease, particularly when stenosis can be demonstrated, and in various forms of myocardial fibrosis, in hearts already damaged by a coronary occlusion, and in myocardial damage resulting from syphilis. Whether the attacks may be due to the excessive use of tobacco or coffee, I do not know, though I believe that both these substances may be responsible for an increased frequency of attacks in individuals already predisposed. It is correct to say that paroxysmal tachycardia has no essential pathology; from the mere presence of the attacks we cannot reason back to any particular lesion which may be assumed as necessarily present; on the other hand, while the attacks occur in many in-

stances upon the basis of pathological change, we can recognize no particular pathological condition as necessarily associated with paroxysmal tachycardia. These attacks may be purely nervous or toxic in their origin, or they may be more directly due to organic cardiac disease, sometimes of advanced degree. The nervous element is an important factor even in those cases which occur in the course of proven disease of the heart.

The symptoms which characterize an attack are largely due to the rapid rate. With the greatly increased cardiac rate, the shortening of diastole diminishes the rest period of the heart and impairs the coronary circulation, shortens the time in which the ventricles may be filled, and interferes with the normal emptying of the auricles. The latter are distended, the pulmonary circuit is overfilled, while the left ventricle does not receive enough blood to maintain the normal pressure within the larger circuit. This fundamental impairment of the circulation explains the usual symptoms and physical findings. The sensation of choking is probably due to the distention of the auricles and great veins. The dyspnea and cyanosis are the result of the impaired pulmonary circulation. Levine and Golden found the pulse pressure much decreased and as low, in one instance, as 8 mm. Barcroft, Bock and Roughton in a careful study of one case found that the pulse pressure fell from 50 to 29 during the attack. It seems justifiable to assume that a like fall in the head-on of pressure occurs in the pulmonary circuit. Dilatation of the auricles may occur early; general cardiac dilatation occurs, if at all, after the paroxysm has lasted some time. The final dilatation of the heart with the development of the signs and symptoms of cardiac failure is partly due to cardiac fatigue brought on by increased activity and to the interference with the coronary circulation by the frequent ventricular contractions. In the case studied by Barcroft, Bock and Roughton, the vital capacity was reduced during the attack from the normal of 4,000 cc. to 1,600 cc. the minute volume of the heart which normally ranged from 5 to 6 litres varied during the paroxysm between 2.8 and 2.1 litres. The volume per beat fell from 77.5 ccm. to 13 ccm. The depth of breathing amounted to about half the normal while the frequency was almost doubled. During the attack, the total oxygen use was less.

The diagnostic problems are threefold. We must differentiate the paroxysmal from the simple type of tachycardia; we must determine the presence or absence of underlying cardiac disease and the site of origin of the abnormal rhythm should be established.

The paroxysmal type of tachycardia is characterized by the abrupt onset, the immediate assumption of a very rapid rate which persists at almost the same level throughout the attack, and an offset which equals the onset in abruptness. The history of similar attacks is important.

Paroxysmal tachycardia may be the manifestation of some organic cardiac disease and the presence of such disease should be established or excluded. When the paroxysms are associated with organic disease, the latter is most often either a rheumatic heart or myocardial fibrosis of the arterio-sclerotic type. The history should be carefully investigated for some disease of the rheumatic group. It has been my experience that many of these attacks occur with mitral disease, particularly stenosis. I am further convinced that a not inconsiderable number are manifestations of damage to the myocardium inflicted by a previous rheumatic disease in hearts which do not show the evidence of endocarditis. Robinson and Hermann have pointed out the relationship of coronary occlusion to attacks of paroxysmal tachycardia of the ventricular type. It cannot be too strongly emphasized that paroxysmal tachycardia is, in itself, not diagnostic of myocarditis. Indeed, in passing, we might call attention to the looseness of the term myocarditis and the vague clinical picture which it too often covers. Myocarditis of advanced degree, even such late stages of myocardial disease as old infarcts or aneurisms, may be associated with attacks of paroxysmal tachycardia, but on the other hand the paroxysm frequently occurs without any other evidence of cardiac disease. Paroxysmal tachycardia is not the result of "Acute dilatation of the heart," though it may cause such dilatation. Some attacks persist until an edema of the lungs appears, yet the attack is not one of "Acute edema of the lungs" in the strict use of the term, and treatment directed to such a condition would be worse than useless. During the attack pain may be referred down the left arm, but the attack is not one of angina pectoris, and will not be relieved by vasodilators.

Some reference must be made to the occur-



rence of attacks of paroxysmal auricular fibrillation. In discussions of the subject paroxysmal fibrillation is often regarded as distinct from paroxysmal tachycardia. The latter term is by many reserved for those cases of paroxysmal acceleration of the cardiac rate in which the rhythm is regular. From the clinical standpoint, a discussion of this nature ought to include a reference of those paroxysms of tachycardia in which the rhythm is absolutely irregular. Paroxysmal fibrillation often occurs in rheumatic heart disease. In this condition either paroxysms with regular rhythm or with the absolutely disorderly rhythm may occur. Paroxysmal fibrillation is most common in three groups of cases — arterio-sclerotic heart disease, chronic rheumatic endocarditis and thyrotoxicosis. The former group is made up practically without exception of individuals past middle life. Where rheumatic disease can be excluded in young individuals subject to attacks of paroxysmal auricular fibrillation the possibility of a thyrotoxicosis should always be thought of. Indeed, the latter is so commonly associated with paroxysmal attacks of this nature that the occurrence of such attacks in young persons without rheumatic heart disease may be looked upon as a diagnostic point of some value in establishing the presence of hyperthyroidism. Determination of the basal metabolic rate may account for the attack of cardiac disturbance and point the way to proper treatment.

The anatomical or functional cardiac conditions which have been mentioned as possible causes of these attacks are not many; the nervous or toxic causes of more or less unknown nature are almost without limit. Whatever the pathology present, it remains true that the attack, in any given case, is apt to be precipitated by some nervous factor. This may be some emotional disturbance, anger, grief, or worry or mental overwork associated with anxiety. Toxic factors, as the excessive use of tobacco or coffee, or nervous reflexes, such as may be set in motion when the stomach is overfilled or due to the flatulence of intestinal indigestion, may be immediately responsible for the attacks. The essential fact to be kept in mind in the determination of the significance of any given attack is this; while the attack is

usually precipitated through the medium of the nervous system, the simple diagnosis of nervous origin is not sufficient. The presence of organic heart disease or disease elsewhere, such as hyperthyroidism, must be proven or disproven.

The question as to the site of origin of the abnormal rhythm is largely one of theoretic interest. The electrocardiographic determination of the location of the site from which the abnormal stimuli arise has, however, some value in prognosis as well as diagnosis. Most often, the ectopic focus from which the new rhythm takes its start is within the auricle though the auriculo-ventricular node may assume the role of pacemaker. Occasional attacks are of ventricular origin. The paroxysm of ventricular tachycardia, in general, has a more serious prognostic significance than that of auricular or nodal origin. This applies to the prognosis of the immediate attack as well as to the prognosis implied by the underlying damage of serious nature to the myocardium.

To the patient the question of prognosis is of the utmost importance, and this depends mainly upon the nature and extent of any underlying disease. The frequency and duration of the attacks are also of significance, though attacks lasting for hours or a day or two may be fairly frequent and in the absence of organic heart disease entirely cease for months or even years after the patient has been relieved from some emotional disturbance. With the persistence of the paroxysm through days or even weeks the outlook becomes more discouraging. With the increase of cyanosis, the onset of edema, falling pulse pressure and weakness with deepening apathy the prognosis is bad. That the paroxysm may last, as apparently it does, through a period of weeks is probably due to the occasional re-establishment of the normal rhythm for short periods which escape the observation of the physician. Where these attacks can be watched in a hospital, it is often discovered that the rapid rate, regarded as persistent, is really interrupted, for a little while at a time, by a restoration of normal rhythm and rate. Frequent attacks of short duration in nervous persons who are free of signs or symptoms or organic disease are of minor importance except for the interference with the

patient's normal activities due to the anxiety produced by the fear of heart disease.

Treatment must be directed to the causative factor and to the attack itself. The latter may be first considered. Often the patient has found that some simple procedure such as swallowing or holding the breath will stop the attack. Occasionally an attack will stop when the patient puts aside work or lies down for a few minutes. Since these and similar measures usually fail medical treatment is generally necessary. Morphine will often stop an attack; the use of a habit-forming drug to control these attacks is a dangerous procedure. The condition in question is recurrent; the afflicted persons are almost without exception of a nervous type. The dangers of morphine are obvious. Sedatives such as the bromides may be of value in diminishing the frequency of the attacks, but are of little value in controlling a paroxysm. Vagal pressure is a procedure of value. As long ago as 1880, Bensen described a case treated successfully in this manner and stated in an appendix to the article, which was prepared in 1878 but delayed for two years before publication, that the method had meanwhile been described by other observers. Where the paroxysm is known to be due to auricular flutter, digitalis will often be of service if given in large doses. Under the influence of digitalis the flutter may be succeeded by a fibrillation with the characteristic absolute irregularity. When this appears the drug should be withdrawn as the fibrillation tends to return to normal rhythm after the digitalis is stopped in these cases. Flutter is not a common condition. The electrocardiograph permits an easy diagnosis, but clinical diagnosis is difficult and uncertain. If the patient has formerly been under observation and it is known that the return of normal rate is associated with the appearance of a rate which is half of the rate present during the paroxysm it is likely that auricular flutter has been the cause of the tachycardia. Usually, the use of digitalis in paroxysmal tachycardia is of questionable value, though it is indicated in attacks of long duration with the appearance of signs of cardiac decompensation. Where the attacks supervene upon an old coronary occlusion, the use of digitalis in large doses is fraught with danger. It may produce a ventricular fibrillation in the

damaged muscle which is already unduly irritable and the onset of ventricular fibrillation means death.

Quinidine sulphate is of definite value in the treatment of paroxysmal tachycardia. In the prolonged attacks it may be given, in small doses frequently repeated, to restore the normal rhythm. In the intervals between the attacks its use often serves to prevent the attacks or notably to diminish their frequency. Quinine hydrobromide may also be used. It is less effective than the quinidine. The use of cardiac stimulants other than digitalis as described is to be condemned. These all serve to stimulate the nervous system even more than the circulatory system and, hence, to aggravate the exciting cause of the attack. After all, the one thing most to be desired is the restoration of normal rhythm and heightened sensitiveness of the nervous system defeats this purpose. Strychnine, caffeine and camphor are useless and probably harmful. Vaso-dilators such as nitroglycerin and amyl nitrite should not be used. Their effect on the blood pressure, further lowering the same, is undesirable.

The essential point in the prevention of the attacks is the discovery and removal of the exciting cause. This may be easy; it is often impossible. The nervous factor is of least importance in the patients with rheumatic heart disease or progressive myocardial fibrosis of arteriosclerotic origin. In both of these groups the attacks of paroxysmal tachycardia are likely to increase in frequency and eventually to be superseded by the establishment of a permanent auricular fibrillation. In the rheumatic group fresh infections may be associated with an increase in the number and severity of the paroxysms. Since the removal of foci of infection appears to lessen the incidence of fresh infections, such may be advised. The direct relationship of foci of infection to the incidence of these paroxysms is a subject about which few facts are at hand, and I will refrain from its discussion. It is, however, true that the cure of hyperthyroidism whether by surgery or otherwise is often followed by the subsidence of cardiac manifestations. The cessation of cardiac symptoms is largely dependent upon the duration and severity of the toxic symptoms prior to the relief of the hyperthyroidism.



## ADENOMYOMAS OF THE RECTOVAGINAL SEPTUM\*

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Adenomyomas have been found involving various organs and structures in the pelvis and abdominal wall. This paper discusses only those found in the rectovaginal septum. There are four reasons why I am bringing these tumors to your attention for discussion at this time.

First. These tumors, if allowed to go unchecked, may fill the pelvis, encircle the ureters, encroach on the lumen of the rectum, and debilitate the patient so that their removal is a very hazardous procedure. This is proven by the record of fatalities that have followed the removal of large tumors of this kind.

Second. It is my belief, and the belief of others, that more of these tumors exist than are being reported. It seems probable that their character and potential dangers are not being recognized. Cullen said in 1914: "The report of four cases in the course of a few months seems to indicate that adenomyoma of the rectovaginal septum is not rare; and with the more careful examination of all rectal or perirectal growths I feel confident that in the near future many more such cases will be recorded." The fact that a surgeon like myself, with only a fair general surgical practice, has seen and operated on five cases in six years would seem to indicate that Cullen is right, and that these cases are not being recognized or are not being reported. It is probable that when these tumors are seen while they are small, they are overlooked or are not connected with the patient's complaints, and later, when they have become quite large, they are taken for deep-seated, extensive persistent inflammations or for malignant conditions.

Third. It is evident from a study of the literature that there are still many controversial points to be settled, and that all is not yet known concerning these tumors and their treatment. It is with the desire to add a little to the general information concerning them that I report five cases today.

Fourth. It is my hope that by calling attention again to these tumors, the general medical profession, the general practitioners and family

physicians, who usually see these patients first, may come to recognize them early when the diagnosis and surgical treatment is relatively easy.

These tumors have been described in medical literature for a great many years and a number of theories have been advanced as to their origin. Some investigators have claimed that they are "embryonic remnants" and are derived from the mesonephric tubules and ducts. Some have believed that they arise from accessory mullerian ducts. Others have thought that they were the result of previous inflammation with ultimate pinching off of the newly formed mucosa or gland structure. Sampson believes that these tumors are caused by the escape of endometrial cells through a patent fallopian tube. They may lodge directly on the peritoneum of the cul-de-sac and grow into the rectovaginal septum, or they may lodge on the ovary first and form a "chocolate" cyst that ruptures and again allows the escape and transplantation of the endometrial cells. This theory of Sampson's is being generally accepted by pathologists and gynecologists at the present time. Cullen believes that these tumors in the uterus arise from the mucosa. In writing of adenomyomas of cervical origin he says: "If these grow posterior, owing to their inherent tendency to become attached, they will spread out into the rectovaginal septum." In another place in writing of adenomyoma of the rectovaginal septum he says: "We know nothing as to the origin of these tumors, but it is certain that their glandular elements are identical with those of the mucosa of the body of the uterus." Recently he has stated that "adenomyomas in the uterus develop from the uterine mucosa. Adenomyomas in structures some distance from the uterus as in the round ligament or umbilicus are due to embryonic inclusion. Adenomyomas developing on peritoneal surfaces in the pelvis are still of doubtful origin with much evidence that they may owe their origin to transplants."

These tumors are found only in women during the menstrual period of their lives, and the majority of the patients have not been pregnant or several years have elapsed since the birth of a child. I do not know what the connection is between sterility and these tumors, but if Sampson is right, and the tumors are caused by endometrial transplants regurgitated through the tubes with the menstrual blood, it would seem

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reasonable to suppose that some obstruction in the cervical canal, such as a partial stenosis or a flexion, caused the regurgitation and also the sterility.

If not removed these tumors may increase in size until they encroach on the rectum and produce obstructive symptoms. They may extend on each side and surround and obstruct the ureters. As the tumor increases in size it will grow into the uterus and cause profuse flowing. With the ureters obstructed the kidneys will be damaged, with the rectum partially obstructed the effect will be felt along the gastro-intestinal tract, and with the increased loss of blood the patient will become anemic and debilitated and the tumor will eventually cause death.

A large tumor is very hard to remove and the operation involves an isolating dissection of the ureters and frequently a resection of the rectum. The weakened patient makes a poor surgical risk for such an extensive operation and the mortality is high. But while the tumor grows extensively in time it does not metastasize. Therefore, with an early diagnosis and early surgical treatment the prognosis is very good.

Practically all of these patients complain of some discomfort, pain, ache or misery, in the pelvis, particularly at the menstrual period. Some will complain of profuse menstruation and some will not. Most of them will complain at some time during the presence of the growth, of pain or discomfort during defecation, particularly at the menstrual period.

On examining with the finger in the vagina, a hard mass can be felt beneath the cervix, which will feel very much like a carcinoma. I want to emphasize that the examination is not complete unless the finger is passed into the rectum. The examiner can not be sure of the size and extent of the tumor unless it is examined through the rectum. These cases furnish another reason for the general importance of a rectal examination. The tumor will be felt just above the anterior mucous membrane of the rectum and closely attached to it. The mucous membrane will be felt to be smooth and intact and this will differentiate these tumors from carcinoma which quickly invades and destroys the mucous membrane.

On examination with the speculum in the vagina, the mucous membrane beneath the cer-

vix may show no change, but it will probably show a little puckering like a small scar or a small bluish cyst that will be almost pathognomonic of the condition. This cyst is formed by the blood that escapes from the endometrial cells in the tumor during menstruation. An examination with the proctoscope will show the anterior mucous membrane of the rectum smooth and unbroken, but it may show a little puckering of that portion of the mucous membrane beneath and attached to the tumor. As the proctoscope is passed in the end one may feel the tumor as it slides over it, and a vague outline of the tumor may be seen.

*Treatment:* It is generally conceded that the best treatment is surgical. There is no evidence in the literature yet that the x-ray or radium exerts much permanent influence on these tumors unless the function of the ovaries is completely destroyed. Theoretically, being composed of endometrial tissue, they should cease to grow and perhaps retrograde when the ovaries are removed, but because Cullen had one case several years ago in which the tumor continued to grow after the ovaries had seemingly been removed it was thought for a time that the removal of the ovaries would not affect the development of the tumor. In a recent article Graves reported three cases of adenomyoma in the rectovaginal septum in which he removed the uterus with the ovaries, but did nothing to the tumor, and the tumor completely disappeared in two cases and had practically disappeared in the third case. Graves concludes "that in the majority of cases the endometriomata may be counted on to atrophy in the absence of ovarian function and that this probability in their behavior is a valuable guide to treatment in cases like those of rectovaginal adenomyomata in which a radical operation would greatly mutilate the patient or seriously endanger her life." As more cases have been reported it is generally conceded now that the complete removal of the ovaries will cause the tumors to cease to grow and will probably cause them to disappear. It would simplify the operative procedure very much if it was necessary to only remove the ovaries and leave the tumor alone, because it is very difficult to completely remove the tumor as will be shown. In large tumors in which the hazard of removal is great it may be better to remove the uterus and



ovaries and leave the tumor, if further experience proves that they retrograde when the ovaries are removed.

If the patient is past forty years of age there would not be much objection to removing the ovaries, but in patients comparatively young there is a serious objection in my mind to removing them, particularly if the tumor is not large. Four of my patients were under thirty-five years of age, two being under thirty, and I preferred to leave the ovaries and remove the uterus and endeavor to remove the tumor. One patient was thirty-seven years old and the ovaries were removed with the uterus and a portion of the tumor left. The portion left disappeared after the operation.

Both Graves and Sampson advance the thought that there may be varying degrees of "virulence" or "malignity" in individual patients, but at the present time we have no method for determining the degree of activity of the growth in the individual patient.

Cullen says: "Where small discrete nodules exist in the posterior vaginal vault, these may readily be removed through a vaginal incision." I question whether this method of removal should ever be tried, possibly because my one attempt by this method was not successful as will be shown later. In a woman who has not borne children and whose vagina is necessarily narrow, any attempt to remove a tumor from the posterior vaginal vault may be very difficult. If Sampson is correct and the invasion is always on the peritoneal side of the septum, it means that when the tumor is felt or seen through the vaginal mucous membrane the entire thickness of the septum is involved.

I believe at the present time that when the tumor has reached a considerable size, say an inch or more in diameter, in a comparatively young woman, that the uterus should be removed with all of the tumor that it is possible to remove, if the ovaries are left. But my mind is open and the reports of many more cases may change it.

The incision should be longitudinal in the midline above the symphysis if the tumor is to be removed. I say this because some of you know my preference for the Pfannenstiel incision in pelvic work, but this is one condition

where one needs all the room one can get, and the midline incision is preferable.

Cullen states that after the uterus is freed on all sides, opening into the vagina anteriorly and laterally, permits the uterus and rectum to be lifted farther out of the pelvis, and makes the removal of the uterus and tumor, with a portion of the anterior wall of the rectum if necessary, much easier. In two cases I placed the patients in the lithotomy position first and incised the vaginal mucous membrane around the cervix before the pelvic incision was made. I did this primarily to be sure that the vaginal mucous membrane was cut below the bluish cysts which marked the location of the tumor, but I found that it made the latter work in the pelvis much easier.

If the rectum is extensively involved it may be necessary to remove a portion of the anterior wall deliberately. It is very hard to dissect the tumor from the anterior rectal mucous membrane because it is so densely adherent and the tumor is so hard. I have taken off little thin slices until I felt that practically all of the tumor had been taken off of the rectal wall. The tumor is usually irregular in shape, and frequently has projections into the lumen of the rectum. I have found it quite difficult to get these projections out and not cut through the rectal mucous membrane. In fact, I accidentally cut through the rectal mucous membrane in two of my patients.

Traction upward on the pelvic portion of the large bowel will bring the upper portion of the rectum and tumor farther up into the pelvis where they are more accessible and makes the removal of the tumor much easier.

The tumor is easily distinguished from the surrounding structures by the touch and with the eye. In describing one of his operations, Cullen says: "The tissues presented a yellowish brown rusty appearance. It was perfectly evident that we were dealing with an adenomyoma." I would describe it by saying that the cut surface of the tumor presented a smooth hard surface *with a close grain* and the color was a dense reddish brown. At any rate the tumor tissue is easily distinguished by sight and touch.

These patients have a tendency to bleed freely during the operation and afterward. Two of my patients bled afterwards and had the va-

gina packed with gauze, and one was taken to the operating room and had some sutures placed in the septum before the hemorrhage was checked.

Drainage may be desirable on account of hemorrhage, and is necessary if the rectum has been opened, but the drain should not be a stiff rubber tube or gauze. A piece of soft rubber dam is preferable and it should not be placed against the suture line closing the opening in the rectum.

As preventive measures it seems reasonable to believe that any obstructions in or around the cervical canal that tend to obstruct the outward flow of the menstrual blood should be removed with thorough dilatation of the cervical canal. This includes the correction of flexions of the uterus, particularly retroflexions, if there is any suspicion that they may be obstructing the normal menstrual flow, and thus cause a backward escape of menstrual blood through the fallopian tubes. I say this hesitatingly since a distinguished Chicago surgeon has written so vigorously against any operation for suspending the fundus of the uterus. It may be that the reports of more cases may show that in small tumors in young women the removal of the tumors with the above procedures is all that is necessary. I am sure that any procedure that will relieve the patient and not include the mutilating operations of removal of the uterus and ovaries will be gladly welcomed by surgeons and gynecologists.

**Case 1. History**—Mrs. W. P. O., seen on October 2, 1919. Aged 29 years. Married five years and never pregnant. Menstruation regularly every four weeks, flows four days without pain. She has a peculiar sensation in the rectum, as if something was pushing out or full and wanted to burst, just three hours before menstruation starts. It is relieved when menstruation is established. She never feels this sensation at any other time. She went to her physician to see why she did not become pregnant. About a year ago she went to him and he discovered a small hard mass in the vaginal vault behind the cervix. Today he examined her and found it had increased in size. It had a feel as of a wart.

**Examination.** There is a mass just below the cervix in the vaginal vault seemingly about one inch in diameter, which is hard and irregular to the touch. I suggested a proctoscopic examination and a Wassermann test. Proctoscopic examination. About four inches within the rectum on the anterior surface the mucous membrane is reddened. In passing the instrument over this area there is a feeling of induration. The growth

does not involve the mucous membrane of the rectum or project into the rectal cavity. The mucous membrane of the rectum up to the sigmoid looks normal and healthy every other place.

**Operation.** October 13, 1919. Removal of tumor in rectovaginal septum through vagina. An incision was made beneath the cervix and when the tumor was exposed to view it was seen to be fully one inch in diameter. It had bluish and whitish areas in it. An incision was made around the upper half of the tumor with the electric cautery, which dissected it loose from the under surface of the cervix and the uterus. The cul-de-sac had just been entered when the cautery failed to work. The incision around the lower part of the tumor was made with scissors. The tumor was cut off of the rectal mucous membrane with considerable difficulty because it seemed to be closely attached and removed. There was considerable hemorrhage, but it did not seem enough to be alarming. Gauze was packed into the cul-de-sac making pressure against the sides of the septum where the oozing was coming from. That same evening a nurse at the hospital telephoned there had been a sudden hemorrhage and she had found the patient with a lot of blood on the bed. The vaginal vault was repacked. The convalescence was uneventful except for a temperature ranging to 100° for a few days and an offensive discharge from the vagina. The pathological report from the tumor showed it to be an adenomyoma.

The patient returned on February 23, 1923. She had recently been examined by a gynecologist in Chicago to see if it was not possible for her to become pregnant. He examined her and found a tumor beneath the cervix. On examination through the vagina a small mass could be felt behind the cervix and the rectum about one inch in diameter. Evidently the tumor had recurred. The removal of the tumor and the uterus was advised.

**Operation.** February 27, 1923. Appendectomy, hysterectomy, complete, oophorectomy, right, salpingectomy, right, excision of adenomyoma in rectovaginal septum. The patient was first placed in the lithotomy position. A circular incision was made through the vaginal mucous membrane about one-half inch from the cervix. The bladder was pushed up and separated from the uterus. The rectum was pushed away from the vagina up to the tumor. I found the tumor very adherent to the rectum and nothing further was done in the vagina. A Pezzer soft rubber catheter was placed in the urethra to keep the bladder empty of urine and a rectal tube was placed in the rectum to keep it empty of gas. The patient was placed in the Trendelenberg position. The appendix was removed. The right ovary was firmly attached to the tumor in the cul-de-sac. Both tubes were enlarged and the fimbriated ends with the ovaries were held down by adhesions. This probably accounted for her sterility. The right ovary was so clearly adherent to the tumor that I thought it best to remove it. The uterus, right tube and ovary were removed and there was considerable hemorrhage. I then attempted to remove the tumor, which was about one inch in diameter, and closely



adherent to the anterior rectal wall. The operation was made easier by drawing upward on the lower end of the sigmoid which brought the tumor up into view. The tumor had to be cut off from the rectal wall with scissors. There was no line of cleavage. In removing the tumor I made two openings in the rectum, which were closed with Lembert sutures. A split soft rubber drainage tube was passed down into vagina and fastened to the right of the rectum with a single catgut suture. The anterior edge of the peritoneum was sutured to the posterior peritoneum and rectum which walled off the operative area from the general peritoneal cavity. Every bit of the tumor was removed. A blue area on the left ovary was cauterized.

March 4, 1923. The drainage tube was removed from the vagina and fecal matter began to escape from the vagina.

March 30, 1923. Discharged from the hospital with a recto-vaginal fistula.

*Pathological report.* Sections are composed of bundles of smooth muscle with considerable stroma throughout which are adult uterine glands, some cystic in character. The major portion of the tissue is smooth muscle, but in places, especially near the edges, are white areas of fibrous tissue. Most of the glands are surrounded or have around one side stroma typical of endometrium. In one place on the edge the surface epithelium stroma glands and muscle are characteristic of the uterus. Throughout all areas there is a patchy and diffuse round cell infiltration, no evidence of malignancy is observed. Considering the microscopical picture and history the growth must be considered an adenomyoma.

November 23, 1925. The patient has been examined a number of times since her operation. The recto-vaginal fistula had been gradually getting smaller. She was examined today and no recurrence of the tumor was found. There seemed to be a narrow fibrous band across the anterior portion of the rectum three or four inches above the anus. This must partially obstruct the lumen of the rectum to about one-half its caliber. I could not feel the fistula with my finger and could not see it through the speculum. After the examination, however, she told me that it was still present. She has no trouble unless her bowels are loose. The opening must lie above the fibrous band felt in the rectum.

Case 2. *History.* Mrs. F. J. H., seen on March 16, 1923, aged 32 years. Married eleven years, no pregnancies. Menstruation: Irregularly two to four weeks, flows six days with severe pain. She has constant pain in the sacral region. She was formerly constipated but is not now.

*Examination.* One or two small tumors were felt just beneath the cervix. There was a sort of indefinite mass in the right pelvis. These two small tumors and the mass in the right pelvis were also felt on examining through the rectum. On examination with the vaginal speculum nothing abnormal was seen in the vaginal vault except a little yellowish discharge exuding from the cervical os.

*Operation.* March 17, 1923. Appendectomy, oophorectomy right, salpingectomy right, excision of three

small tumors from rectal vaginal septum, probably adenomyoma. There was a cyst in the right broad ligament about three inches in diameter. The cyst and right tube and ovary were removed. I then found the rectum glued fast to the posterior surface of the cervix and lower portion of the posterior surface the uterus, seemingly by some hard tumor like tissue. This hard tissue was removed from the cervix and uterus and from the anterior wall of the rectum as closely as I dared to remove it. The incision was closed and the patient placed in the lithotomy position. I intended to amputate the cervix but when I got a view of the posterior vaginal vault I saw the small tumor about one-half inch in diameter that I had felt at the pre-operative examination. It was blue in color and looked like a cyst. Evidently I had overlooked it with the examination through the speculum previous to the operation. Two of these tumors were removed from the vaginal side. There was no line of cleavage and they had to be cut away with scissors. I cut as close to the rectum as I dared and tried to remove all the tumor. There seemed to be little, if any, bleeding and no attempt was made to close the vaginal wound. That afternoon the nurse telephoned that the patient had been bleeding profusely from the vagina. The vaginal vault was packed tightly with gauze. That evening the nurse reported that the patient was still bleeding and that the packs were saturated. She was taken to the operating room and the vaginal vault was infiltrated with a solution of novocain. Several small bleeding areas were found on the edge of the mucous membrane. There was a general oozing from the center of the wound and this was not stopped until three or four deep sutures were taken in the wound and evidently in the sides of the septum. This stopped the most of the bleeding and gauze was packed in the vagina.

April 8, 1923. The patient's recovery had been uneventful except for a considerable amount of vaginal discharge with a very offensive odor and a temperature of 101° for a few days.

*Pathological report.* The sections all contained smooth muscle with acini lined by cylindrical epithelium in a lymphoid stroma. In the largest mass there is a cyst lined by squamous epithelium and surrounded by fibroid tissue and a local dense round celled infiltration. This cyst is just beneath the epithelial lining of the vagina. Smooth muscle fibers are present some distance from the cyst. The sections support the clinical evidence that they are adenomyomata.

November 20, 1925. The patient has been examined several times since her operation and no return of the tumor has been found. She was in today and I examined her both vaginally and rectally and could find no return of the growth.

Case 3. *History.* Mrs. H. W. B. seen on September 10, 1923, aged 37 years; married thirteen years, one child twelve years old. Menstruates regularly every four weeks, flows four days, no pain. For about a year she has had a soreness in the left upper abdomen. It is worse at her menstrual periods. Her breasts get sore at her menstrual periods. Certain articles of food,

like cabbage and chipped beef, cause her distress and vomiting. She vomited about two weeks ago. She is badly constipated but has no bladder trouble.

*Examination.* The uterus is retroflexed and I was not able to raise the fundus up in position. Pressure on the fundus produced great discomfort. There was a mass in the left pelvis by the side of the uterus.

*Operation.* September 13, 1923, hysterectomy complete, salpingectomy bilateral, oophorectomy bilateral, excision of portion of tumor in recto-vaginal septum. Both ovaries were held down by adhesions in the pelvis. Nothing abnormal was found with the gall-bladder or stomach. In the pelvis I found a hard tumor about one inch in diameter in the recto-vaginal septum. This tumor was closely adherent to the anterior wall of the rectum. The peritoneum over the septum had the folded-in appearance when viewed from above that is seen in adenomyoma. Following Dr. Cullen's advice we decided to remove the uterus completely, and the uterus was completely removed with both tubes and ovaries. A small portion of the tumor was left on the anterior rectal wall. Recovery uneventful.

*Pathological report.* The structure of the tissue is the usual structure of the usual muscle tissue including a few gland acini lined by cubical epithelium and surrounded by a narrow layer of lymphoid stroma similar to that found in the uterine mucosa. There is no evidence of malignancy. Diagnosis—adenomyoma.

December 2, 1925. The patient has been examined several times since her operation and no return of the growth was found. She was examined today and with the index finger in the vagina and rectum, I found no recurrence of the tumor.

Case 4. History. S. A. seen on March 15, 1925, age 25. Unmarried, no pregnancies. Menstruates regularly every four weeks, flows four days with severe pain during and afterwards. She feels a feeling of weight and heaviness in the pelvis. She has a soreness and discomfort when her bowels move. She does not menstruate profusely. She has had the feeling of heaviness in the pelvis one and one-half years and it has been worse the last six months.

*Examination.* The uterus was retroverted and has a small tumor in the posterior wall or else she has a small tumor in the rectovaginal septum. This can be felt through the vagina and through the rectum.

*Operation.* March 16, 1925, hysterectomy supra-vaginal and excision of tumor in rectovaginal septum. After the incision was made I could easily feel the tumor in the rectovaginal septum. It was not very large. A supra-vaginal hysterectomy was done. Then traction was made upon the lower end of the sigmoid and the tumor brought into view. It was removed very carefully to avoid getting into the rectum.

March 30, 1925, the patient discharged from the hospital today. The convalescence had been uneventful.

*Pathological report.* The sections consist of irregular bundles of smooth muscle and loose and denser fibrous tissue. In one place in the latter area are two typical uterine glands with a small amount of the

usual stroma. Diagnosis—adenomyoma of rectovaginal septum.

December 9, 1925. The patient was examined today and with the index finger in the vagina and rectum, no return of the growth was felt.

Case 5. History. Mrs. F. L. B., seen on November 16, 1925, aged 35 years. The same physician referred this patient who had referred the first patient. He saw a bluish cyst in the vaginal vault and made the diagnosis before he called me to see the patient. Married ten years with no pregnancies. Menstruates regularly very four weeks, and flows seven days with pain the first two days. For three months she has been flowing a little scantily between periods. Five years ago she began to have pain on defecation during her periods but she has not noticed it for the last six months. The flowing scantily between the periods made her go to her family physician. For four months she has been conscious of an uncomfortable sensation in the pelvis that extended over to the right groin.

*Examination.* Through the vagina a hard, nodular mass can be felt in the rectovaginal septum. On examination through the rectum this is irregular in shape, and about one and one-half inches in the longest diameter. The mucous membrane of the rectum is smooth but the tumor is felt to lie immediately above the mucous membrane of the anterior wall of the rectum and has nodules which project into the lumen of the rectum pushing the mucous membrane before it. On examination with the vaginal speculum a small blue cyst can be seen in the right posterior vaginal vault. Just to the left of this cyst the mucous membrane is puckered as with a small scar.

*Operation.* November 18, 1925, appendectomy, hysterectomy complete, salpingectomy bilateral, oophorectomy right, resection of left ovary, excision of tumor in rectovaginal septum. The patient was placed in the lithotomy position and the mucous membrane was cut entirely around the cervix and below the little blue cyst seen in the posterior vaginal vault. An attempt was made to remove the tumor in the rectovaginal septum from the rectum with scissors but failed because of the narrowness of the vagina. Patient placed in Trendelenberg position. The appendix was removed. The right tube was seen to contain a hydrosalpinx and the right ovary was very small and leathery and was fastened to the side of the pelvis. The uterus and cervix were removed with the right tube and ovary. The left ovary had a clear cyst on the end and another "chocolate" cyst by the side of it. These two cysts were removed and the remainder of the left ovary was left. The tumor in the rectovaginal septum was then felt and seen. By making traction on forceps tightly fastened to the posterior wall of the vagina and also on the lower end of the sigmoid the tumor was brought up where it could be seen. I very carefully removed several small pieces of tumor with scissors and did my best to keep from getting into the rectum. As I removed the last small piece I saw the mucous membrane of the rectum and saw that I had made a hole in it. This opening was closed with tannated catgut sutures put in Lembert fashion



and turning the edges of the hole in the rectum into the lumen. Practically all of the tumor had been removed in small pieces with the scissors. A piece of rubber dam was put down into the vagina to drain the pelvis. The anterior flap of the peritoneum which had been turned back from the uterus was sutured to the posterior pelvic wall and the lower portion of the sigmoid so as to wall off the raw surface from the general peritoneal cavity.

December 4. Recovery was uneventful and the patient left the hospital today.

*Pathological report.* Sections of tissue showed the structure to be of a typical adenomyoma with no evidence of malignancy.

#### CONCLUSIONS

1. No examination of a tumor in the recto-vaginal septum is complete unless the examining finger is passed into the rectum.

2. In the removal of these tumors a great deal of attention must be paid to hemostasis as these patients have a tendency to bleed freely during and after the operation.

3. If an accidental or deliberate opening is made in the rectum, the drainage material should not be gauze or stiff rubber, but soft rubber dam, and the rubber dam should not be placed on the suture line.

4. A great many more cases must be reported before definite conclusions can be made as to the proper treatment. Until definite conclusions can be formed the treatment of each patient must be determined by the judgment of the surgeon.

#### DISCUSSION

Dr. J. J. Moore, Chicago: Dr. Collins kindly asked me to show slides showing the histological structure of the tumor growths of his cases. I will show them first and then continue with the discussion.

From the slides you can see how difficult it is to remove these tumors when they are lying between the vagina and extending into the rectum. Adeno-myoma, I believe, are commonly overlooked. During the last five years we have had six cases, four of which were from Dr. Collins, where in each instance the diagnosis was made before operation. I had another one yesterday but with no clinical history. When one physician has four or more cases in six years and we received no others in the large amount of material sent through the laboratory it would signify that the majority must be undiagnosed.

The theories of Sampson and others that this tumor originates through the transplantation of endometrium is now being supported by the work of Jacobson of New York by endometrial transplants in rabbits. The transplants reacted somewhat like the normal endometrium since after the menstrual cycle a larger

number of ducts were present than during the quiescent stage. When the tumors have lasted a long time the stroma will show the typical findings of the menstrual endometrium. Large chocolate cysts were found in some of the animals. In one case in a human he found during the period of pregnancy typical decidua in these adenomyomas.

Dr. Henry Schmitz, Chicago: The subject of adenomyomata is very interesting both from the pathologic and clinical standpoint. From the pathologic standpoint it is particularly of interest to try to determine where the so-called endometrical tissues come from. It is obviously clear if an adenomyoma is found directly beneath the endometrium of the uterus we can assume that we have an adenomyoma. If the tumor is near the horn the question arises whether there might not have been an extension from the Wolffian body. The question arises that perhaps the epithelium of the Wolffian body does not resemble the endometrium or if this epithelium from the Wolffian body should not be considered as true endometrium. We must always think of a possible metamorphosis of the endothelial cells. It is particularly of interest to go into the history of these adenomyomas. We were under the impression that our most notable work on adenomyomas done in this country was by Cullen, published in 1908 in his wonderful monograph on adenomyoma. In 1918 Sampson published his paper on chocolate cysts of the ovary due to transplantation into the peritoneal cavity and even into the ovaries themselves. Later on he came to the conclusion that it was a septic condition which probably came from the endometrium.

Another question arises, why is it that we have such dissemination of connective tissue? This will bring us to the discussion of the origin of carcinoma. It has been said that carcinoma arises by misplacement of endothelial cells into the submucosa, that active proliferation of the endometrial tissue follows and that this is followed by the development of cancer cells.

As far as the clinical picture is concerned, Farr in 1896 was probably the first one to describe this as a clinical entity. In doing this he called attention to the history of what is usually called adenocarcinoma. The patient gave a history of having severe menstruation starting late in life. When it began it began as a very profuse menstruation and as the years went on the menstruation became very profuse and more prolonged. At the same time a coagulum would form and the menstruation became painful. It is clear to us that these patients finally suffered from a chronic pelvic peritonitis because of the adhesions found in the pelvic cavity. When this occurs and when the tumor grows it has a tendency to go downward, and these patients have other symptoms like pressure and inflammation in the bladder and pressure symptoms in the rectum, so there is really a clinical entity. We may have connected these cases with the so-called adenomyomas.

As far as treatment, I would agree with Dr. Collins to do a surgical operation provided the tumor is local-

ized. If the tumor cannot be removed of itself, I presume removal by radical extirpation of the uterus and adnexa would be the method of choice.

## MEDICAL DIATHERMY AS AN ADJUNCT TO SURGERY.

MARSHALL S. UNDERHILL, M. D.  
EVANSTON, ILLINOIS

Ordway,<sup>1</sup> writing on conservative therapeutics, makes the flat statement that the neglect of the proper instruction and use of physical therapy by the Medical profession, has been a potent factor in the development of the so-called cults.

Most doctors are skeptical about the therapeutic value of new pharmaceutical preparations and modes of treatment; they should not, however, hesitate to take up new forms of old and proven remedies.

and convective heat which operates superficially and penetrates very little. Diathermy is heat derived from a high frequency current of high voltage and relatively low amperage. The oscillations are so far removed beyond the point at which human tissue responds that the result is a conversion of electrical energy into heat energy. By the use of suitable sized and proper application of electrodes, the heat may be localized and the intensity regulated at will. We have here then the reason for the greater value of diathermy as compared to the older methods of applying heat.

This discussion is confined to the heating of tissue within physiological limits or medical diathermy. By means of different types of electrodes and a change in relation of voltage and amperage, the tissue may be so heated as to bring



Plate 1. Photographs show terminal result of the fracture of the humerus shown in Fig. 1, A. Patient able to place his hand to his mouth (flexion), put his hand in his hip pocket (extension), full supination and pronation. Photographs taken four months after injury.

Since time immemorial, heat has been recognized as a valuable remedial agent and has been widely used in Medicine. The only drawback to the use of heat heretofore has been the method of applying it. With the introduction and perfection of the diathermy machine, I believe the problem has been greatly solved.

Heat may be conductive, convective and converse. As Ewerhardt<sup>2</sup> so correctly states, conduction is the "old-fashion" household method of applying heat wherever that therapy seemed indicated. Hot water bottles, electric pads, hot poultices, etc., are forms of conductive heat. Convective heat, similar to conduction heat, as far as the old fashion idea is concerned, is heat radiated from a source not in contact with the body. Heat from hot air cabinets, etc., are forms of convective heat.

By diathermy is meant the process of heating through the tissue as contrasted with conductive

about destruction; such a procedure is termed surgical diathermy.

It is an established fact that heat when properly applied is a reliable analgesic and a most dependable agent for the control of spasm. It increases the arterial flow as well as the return circulation, bringing quantities of fresh blood to the part.

Its sedative warmth imparts a feeling of comfort keenly appreciated by the patient. Its relaxing action on the muscles near the site of injury makes proper massage and movements infinitely more effective. It promotes absorption of exudates, shortens the time of disability and enables the surgeon to secure results that otherwise would be impossible. Last, but not least, it instills confidence in the patient toward his doctor.

Diathermy is valuable in many diseases; some, more than others. Especially is it valuable where



the condition is acute and the proper regime calls for movement of the injured parts. It is in cases of this nature, fractures, sprains, dislocations, bursitis, etc., where diathermy is a valuable adjunct to surgery.

I wish to present the following cases as illustrative of the value of diathermy conjoined to surgery:

Case 1. Mr. E. K., aged 37 years; past history unimportant other than that he survived a fractured skull in July, 1923. March 5, 1926, he fractured the left humerus, one and one-half inches above the elbow joint with displacement of the fractured ends of the bone and severe contusion of the soft parts. (Plate I and Fig. 1, A.) Good anatomical position was obtained on reduction, but we were unable to retain it. The arm

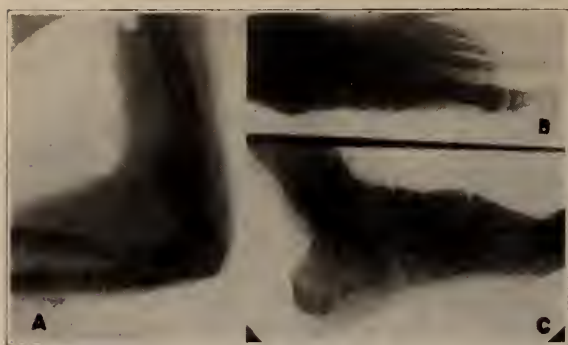


Fig. 1, A. Fracture of the humerus after reduction showing atrocious anatomical position obtained and yet a good functional arm as a terminal result.

Fig. 1, B. Fracture of the metatarsals of the left foot.

was treated with a plaster right angle splint for ten days, then a Jones humerus traction splint was applied for ten days with the hope that it would aid us in correcting the deformity; a plaster jacket was then put on for nine days. Union at this time was good. Diathermy with passive and active motion was then given daily for two months, followed by daily massage for two weeks by Mr. Eric Gustavson of Evanston. The patient went to work three months and ten days from the date of the accident. Diathermy was continued two times a week for some time after the man went to work. Diathermy to my notion was invaluable in this case; at the beginning of active and passive motion, the patient was unable to move the forearm over five degrees without heat; with heat, he could move it about twenty degrees without pain or discomfort. The callus which at first was as large as the arm, rapidly subsided with diathermy. I consider this a good result as judged by the ability of the patient to put his hand to his mouth (flexion) and place his hand in his hip pocket (extension). I attribute the greatest part of the success of this case to the use of diathermy. Photos show the arm four months after injury.

Case 2. Mr. H. B., aged 28 years, married; past

history unimportant. June 9, 1926, he suffered a fracture of the metatarsals of the left foot. (Fig. 1, B and C.) The foot was placed in a plaster cast for two weeks and then a wire splint was applied. Passive and active motion was begun at the end of three weeks and partial weight bearing at the end of one month. At this time a large callus was present which rapidly subsided with the use of diathermy. The patient went to work nine weeks post-injury with the foot in excellent condition. A report from the case six weeks after the patient started working was that the result was excellent.

Case 3. Mr. F. R., aged 67 years; past history unimportant. August 12, 1926, he suffered a fracture of the transverse process of the fifth lumbar vertebra. (Fig. 2, A.) He was treated in the supine position for ten days and was then given diathermy three or four times weekly for five weeks. He was dismissed with no disability due to the injury. This man at the time diathermy was started was having considerable pain at the site of injury, which gradually subsided.

Case 4. Mr. W. U., aged 18 years, past history unimportant. August 13, 1926, suffered an uncomplicated fracture through the left superior ischial ramus. (Fig. 2, B.) He was treated in the supine position with adhesive tape straps to the pelvis for five weeks. One might have been tempted to treat this case with diathermy; however an analysis of the x-ray plate shows a large pathological area of the right superior ramus which might readily be either benign or malignant—in the advent of it being malignant, diathermy would be decidedly contra-indicated, so it was not given, and the case held under observation. This emphasizes the importance of having a general survey of the situation and a correct diagnosis in any case where diathermy is to be used.

Case 5. Mr. J. K., aged 41 years, mechanic, past history unimportant. The chief complaint was pain in the right elbow of three weeks' duration. The pain was first noticed at the time he injured the elbow by jerking it while lifting a heavy object. Clinical examination of the elbow region was negative. One might have been tempted to regard this case as one suitable for diathermy; however, an x-ray made by Dr. Alexander revealed a small spicule of bone with sharp edges which showed in the anterior posterior\* view of the elbow between the outer edge of the radial head and the radial condyle of the humerus. (Fig. 3, A.) The diagnosis in this case was deferred and the case held under observation. Diathermy was not given. This emphasizes again the necessity of the need of correct diagnosis before diathermy is used.

Case 6. Mrs. C. C., aged 53 years, housewife. She had suffered with arthritis of the right knee for three months (Jan. to March, 1926), being confined to bed. The past history was unimportant other than that she had been under good anti-arthritis regime while confined to bed with no improvement. Diathermy was started and after seven bedside treatments with a portable machine the patient was up and about. Diathermy was continued for about eight weeks three times a week and toward the end of this period the

patient was given five Mirion injections. The patient was dismissed clinically free from trouble following tonsillectomy July 5, 1926, and has enjoyed a good summer driving her car every day.

x-ray of the same knee taken at the time the patient was dismissed, with interpretation and comparison with the former plate by Dr. Swafford at the Evanston Hospital.

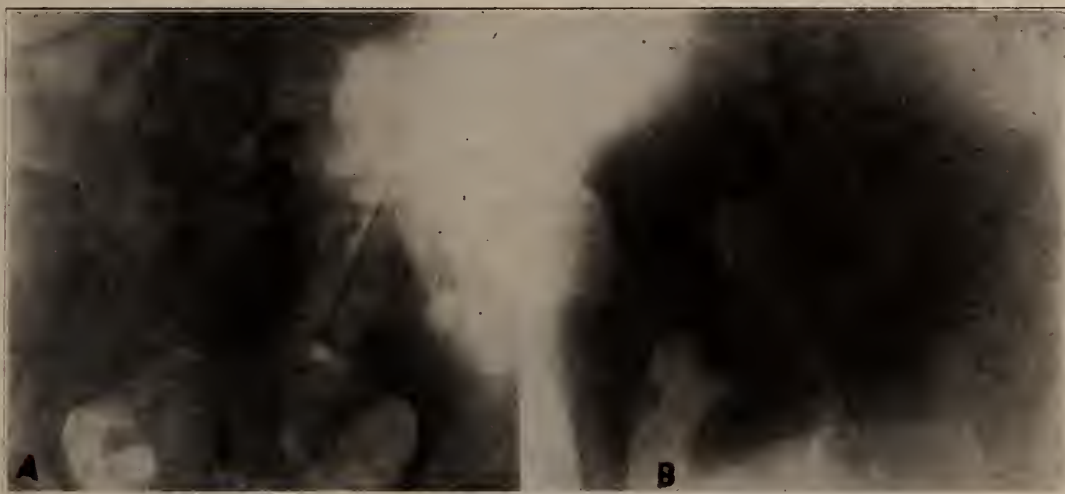


Fig. 2, A. Fracture of the transverse process of the fifth lumbar vertebra.

Fig. 2, B. Fracture of the left superior ischial ramus with a large pathological area shown of the right superior ramus, probably a bone cyst.

Fig. 3, B shows the x-ray of the knee with the interpretation by Dr. Jenkinson taken at the beginning of the diathermy treatments. (Fig. 3, C) shows the

Case 7. Mrs. C. G. B., aged 57 years, suffered a fall, injuring her chest July 30th, 1926. The immediate cause of the fall was her knee "giving away under



Fig. 3, A. Plate of right elbow showing a small spicule of bone with sharp edges between the outer edge of the radial head and the radial condyle of the humerus.

Fig. 3, B. X-ray of right knee, plate made previous to diathermy treatments. Report by Dr. Jenkinson. There are many hypertrophic changes involving the bones of the right knee. The epicondyles are irregular and the head of the tibia shows osteophytes involving the lateral surfaces. The articular surfaces of the tibia are somewhat thickened. The patella is thickened and there is a good deal of new bone formation involving the posterior and superior surfaces.

Fig. 3, C. X-ray of the same knee as Fig. 3, B. only taken after about three months of diathermy treatment. Report by Dr. Swafford. Hypertrophic osteoarthritis involving the bones of the right knee. The lateral surfaces of the head of tibia show a number of osteophytes. The epicondyles are irregular. The patella shows a good deal of new bone formation involving the posterior and superior surfaces. I believe, however, that the process is not as extensive as in the former examination.



her." An x-ray taken of the knee showed a marked hypertrophic arthritis. (Fig. 4, A and B.) Diathermy was applied to the knee for a period of three months, first three times a week and then two times a week; along with the diathermy she was given ten injections of Mirion. This patient responded to the diathermy treatments very much as Dr. Porter describes the experiences of his patients with the same treatment. (3) She was dismissed greatly improved.

Case 8. Mr. C. J. C., aged 47 years, past history bursitis of the left knee. It was of three months' duration and had not responded to the ordinary household methods of applying heat. (Fig. 4, C.) Diathermy was

chief complaint was pain especially on motion. This case is injected to show the practicability of diathermy. The patient was five feet tall and weighed 250 pounds. After six treatments, the patient pronounced himself cured after giving himself a therapeutic test of bowling four games without trouble.

Case 11. Mr. L. C., aged 41 years; past history unimportant. Injured his wrist three weeks previous. Examination showed a tenosynovitis with marked exudate, so much so, that I at first thought it to be a ganglion with a subsequent injury. Diathermy was given and the swelling rapidly subsided. This patient was seen by Dr. Wm. R. Cubbins at the half-way mark, who advised continuation of the diathermy. I am sure

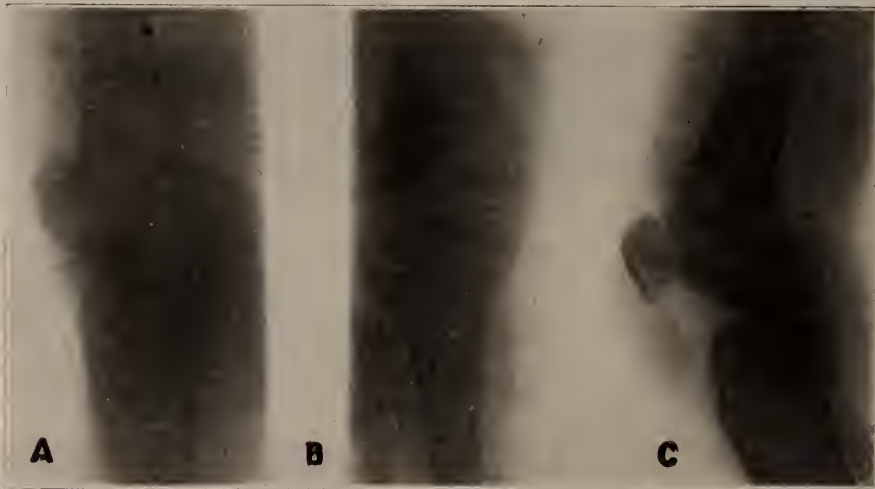


Fig. 4, A and B. X-ray of the right knee showing a marked hypertrophic arthritis.

Fig. 4, C. X-ray of the right knee showing a marked bursitis. The soft tissue shadow is almost an inch in diameter anterior to the patella.

important only in that his work was that of a carpenter which caused him to rest on one knee a great deal of the time. Clinical examination disclosed a marked started and in ten treatments, given while the patient worked, the knee was normal. I am sure that the result in this case would have been impossible without the use of diathermy.

Case 9. Miss A. L., aged 24 years, single, referred to me by Dr. John McClellan for diathermy because of hypertrophic arthritis of the lumbar spine. She was having enough pain to cause her to lose sleep. Diathermy gave her immediate relief. Diathermy applied to the lumbar spine caused her to menstruate five days in advance of her regular period although she had always been regular to the day. No doubt normal functions can be altered by diathermy and one should have a general survey of the case before giving treatments.

Case 10. Mr. C. S., aged 32 years, referred to me by Dr. John McClellan for diathermy because of a hypertrophic arthritis of the lumbar spine. The patient's

that the result here with the older methods of heat would have been impossible.

Case 12. Mr. M. C., aged 24 years, student; past history unimportant; August 31, 1926, suffered general body contusions the result of an auto accident. On the fourth day post-accident his left limb, from the hip to the knee became suddenly discolored due to ecchymoses. Three diathermy treatments and the exudate was completely absorbed.

Case 13. Mrs. J. C., aged 57 years, married, mother of five children. She had had an appendectomy and a uterine suspension some time previous. I was called in the middle of the night because of acute abdominal distress of sudden onset. A tentative diagnosis was made of partial intestinal obstruction and the idea conveyed of temporizing until she could be up and about and have some x-ray work done. About four days later the husband informed me that he had contracted a Neisser's coccus infection and had infected his wife a few days prior to her having the acute abdominal distress. A rather elaborate history taken

at this time disclosed the fact that about four years previous the patient began to have a profuse vaginal discharge, which probably was the first inoculation. x-ray of the colon by Dr. Alexander disclosed multiple pelvic adhesions. An x-ray of the stomach by Dr. H. Potter was negative other than for hyperperistalsis. Diathermy was given by the abdominal vaginal method as described by Cherry<sup>4</sup> with the exception that a block tin electrode was used for the abdominal electrode. In a short time her condition was so much improved that I feel that good pelvic treatment in this case helped me clear up the question as to whether or not I was dealing with a surgical abdomen.

My experience has been in giving diathermy at the office, with my own machine. These cases are but a few of many in which I have used this form of heat. My results with the cases of lesser importance such as sprains, etc., have been just as pleasing. To date I have had no unhappy experiences.

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### THE EARLY DIAGNOSIS AND TREATMENT OF DUODENAL ULCER\*

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The medical literature of the world abounds in many articles relating to the diagnosis and treatment of duodenal ulcer. The literature of 25 years ago disclosed the fact that pathologists barely recognized the ulcer, and the descriptions of the clinical picture of duodenal ulcer were extremely uncommon. White made the statement in an address before a Medical Society that he considered duodenal ulcer a "coming disease." He drew a picture analogous to appendicitis which 50 years previous was an uncommon disease—not that it did not exist; but, that the diagnosis was not made. Today, however, appendicitis goes rarely undiagnosed on account of the thorough knowledge we have of the clinical symptoms.

So much new information about chronic duodenal ulcer has accumulated in the last few years, due not to the achievement of the surgeons alone, but with the aid of the x-ray, that we are revising our ideas about frequency and the

diagnosis of this condition. Early statistics have been very misleading. This can in part be accounted for by the fact that the gastric and duodenal ulcers were not properly separated, and that the surgical statistics dealt with the severest type of cases. Again autopsy findings revealed ulcers that gave no apparent clinical symptoms during life. Much of the confusion of ideas is due to the different stages of the disease in which the patient has been observed. The practitioner sees the early cases as what appears to be a simple hyperacidity. In the medical ward of the hospital we see the definite cases whose duration of symptoms have extended over a longer period of times and are complicated either by hemorrhage or obstruction. We are now, however, gradually emerging from the confusion and getting a better grasp of the condition as we give more particular attention to the earlier symptoms.

Duodenal ulcer is not a rare disease, but many cases are seen and not recognized. Autopsy figures are changing from small figures to larger. and modern surgery shows a steady increase as to the number of duodenal ulcers compared to gastric ulcers. The old figures showed 12 peptic to 1 duodenal; but, now the statistics show about 6 duodenal to 1 gastric. This ratio seems established for the chronic severe type, but need not necessarily hold good for the total number of both mild and severe cases. The disease seems to predominate in men, and more than three-fourths is reported in the male sex. Certain families seem more susceptible than others, and Stiller believes certain physical types are more susceptible to peptic ulcer.

The etiology of duodenal ulcer as it occurs clinically is not understood. There are probably a number of factors that contribute to its production. Experimental ulcer as produced in the laboratory usually heals promptly, while the clinical ulcer is characterized by its chronicity. One of the essential features that have been recognized is the necrosis involving the mucous membrane and also the digestive action of the gastric juice. Necrosis may be the result of many causes. But this condition, it is believed, would undergo natural repair and be without serious clinical symptoms in the absence of the action of the gastric juices.

The usual location of the ulcer 1-1½ inches from the pylorus lends support to the fact that

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gastric juices have an important part to play. Mayo says that it is only within this neutralizing fluid that ulcers can take place. Much experimental work has been done to show the importance of the role played by the blood vessels. From the post-mortem examinations following these experiments, accumulated evidence shows that thrombosis and embolism of the arterial twigs supplying the mucous membrane, result in actual necrosis. Many different experiments have been performed in the production of necrosis of the mucosa. Ulceration then followed as a natural consequence. The disintegration of the slough was hastened by the action of the gastric juices. Bolten has shown that poisons of metabolic origin are capable of producing ulcers. He says necrosis is not necessary to produce an ulcer, but that the cell must be damaged to some extent. It is his opinion that hyper-chlorhydria may contribute to the devitalization of the tissue, and thus render it more susceptible to the digestive action of the gastric juices. Rosenow produced ulcer from the injection of cultivated bacteria and found that the bacteria may be identical with those located around abscessed teeth. There are reasons to believe that acute ulcer may appear and heal spontaneously. This may be due to a lowering of the natural resistance of the mucosa for a time as a result of bacterial toxins. Under normal conditions the mucosa shows a resistance to the acid and pepsin which is normally higher in the stomach than in any other part of the living body.

The primary cause of ulcer is still a debated question, and until we know more of its exact etiology our line of treatment must be directed against the conditions that are factors in producing its chronicity. The hyperacidity which is determined in gastric analysis has been attributed to hypersecretion. We know with what frequency it is associated with duodenal ulcer. Some investigators believe that it is due also to an abnormal motility of the stomach or a hypo-neutralization.

The early recognition of symptoms of ulcer is of great importance. If the symptoms are interpreted early in the disease then the treatment is much simpler, and the chance for cure is, by far, better. It is true that many ulcers go undiagnosed for years. This, perhaps, is the result

of the fact that pain, vomiting and hemorrhage are usually considered to be the outstanding symptoms. These symptoms we know never occur early in the disease but occur late, if at all. Ulcer is at times a very difficult disease to diagnose, and many patients are unwilling to undergo repeated examinations that are sometimes necessary for an accurate diagnosis. The history of repeated attacks of a "little indigestion" should impress us that the condition is probably one of a more serious nature.

This gastric disturbance, which the patient thinks trivial goes on for a number of years, while the symptoms gradually become severe, and then medical aid is sought again, and the advice of the physician is adhered to with definite improvement. Ulcers if diagnosed early respond readily to ambulatory treatment. It is the old severe type that demands dietetic and medical treatment with prolonged rest in bed. The text-book picture of pain, vomiting, and hemorrhage occur only late in the disease, and to diagnose ulcer early one must forget that these are late symptoms. Early symptoms are variable, but present a fairly constant syndrome.

There is the usual complaint of a vague discomfort, or a burning sensation in the epigastrium or near the umbilicus. This pain may begin from 30 minutes to 2 hours after eating and last three hours. Sometimes, however, pain is not an early symptom, but in a small percentage of cases it is the most persistent complaint. The pain has been described as being a dull aching pain. It is increased by taking of course foods—crusts of bread, spices and pickles. Coffee, tea and fried food aggravate the condition.

Sour eructation is sometimes a frequent and early symptom. This occurs from  $\frac{1}{2}$  hour to 3 hours after eating. Usually in the first years only an acid fluid is belched. Gaseous distension of the abdomen is often a distressing complaint and belching very often gives relief to this complaint.

Nausea is not usually an early symptom but it occurs in some cases associated with epigastric discomfort. The nausea and vomiting is not usually associated with ulcer unless it has existed for a number of years. Hematemesis is a late symptom, but can occur early in the disease. Moynihan claims the symptoms are regu-

lar, definite and not easily mistaken. Repeated severe hyperacidity in healthy young men, between the ages of 30 and 45 should not always be taken as a neurosis, but points sometimes to something organic. In some cases the symptoms are more severe than others. In studying the histories of definite duodenal ulcers in Gorham's Clinic at the out patient department of Washington University we were impressed with the long duration of symptoms. Some of the patients gave a history of having been treated medically over long periods of time. Their usual complaint was indigestion and "sour stomach." One interesting point noted was that patients who were below normal in weight gave very definite and severe symptoms of duodenal ulcer, which were of a fairly short duration.

In the treatment of duodenal ulcer the ideal method is naturally rest in bed and hospitalization, but this line of treatment is frequently impossible. The predominant factor in the successful treatment is an attempt to relieve the symptoms, and induce any condition that is favorable for the healing of the ulcer. Thorough treatment of systemic conditions is absolutely necessary, especially for any infection that may exist. However, the primary systemic fault is often very difficult to find.

The physical and mental makeup of the patient must be taken into consideration. Abdominal infection must not be overlooked, especially appendix, and gall-bladder infections. The visualization of the gall-bladder by the Graham method should give us some interesting data on gall-bladder and duodenal conditions. The negative Wassermann reaction can not be depended upon.

Diet is the important thing in the treatment of the condition. Carbohydrates leave the stomach rapidly and do not bind acids. Fats appear to inhibit secretion and motility while proteins stimulate gastric secretion and bind acids. They are also slow in emptying from the stomach. An important factor in prevention of healing of ulcers is activated pepsin, and free hydrochloric acid is necessary for this. By the use of food and alkalies we attempt to control this activation. In a fasting period of a normal subject the neutralizing apparatus is active, and in the ulcer cases this is interfered with. It is for this reason that we give non-stimulating foods at fre-

quent intervals. Regular feedings are given as three small meals along with extra feedings of cream, malted milk at 10 a. m. and 3 p. m., and at bed time. Emphasis is placed upon regularity of feedings. High fats are chosen on account of the inhibition of secretion and motility. Variety of food is added as the patient shows signs of improvement. The alkalies are used since they appear as means of neutralizing free hydrochloric acid at least symptomatically. When used we must bear in mind alkalosis and kidney irritation.

The drugs most frequently used are sodium bicarbonate, magnesium oxide, calcium carbonate and bismuth subnitrate. They are always given between feedings and at times in combination. Constipation is overcome by the increase of magnesium oxide. Kussmaul thinks bismuth subnitrate may have a specific action on the ulcer. Atropin, belladonna and bromides are used with the hope of controlling the spasm.

In duodenal ulcer it is the patient with mild symptoms that is most frequently neglected. The internist and the general practitioner should give the patient the benefit of an early diagnosis. This should be followed by the proper persistent medical management.

Murphy Building.

#### DISCUSSION

Dr. Walter Lincoln Palmer, Chicago: Dr. Beykirch and Dr. Abbott are to be congratulated upon these two splendid papers. The subject under discussion is a very interesting one. In the first place, the original cause of ulcer is not known. There are many theories as to its etiology, but none of them has been proved. At the present time, the idea that foci of infection play an important part seems to be predominant. I am far from convinced that it plays the role assigned. The most typical chronic ulcers which have been produced experimentally are those which have been produced by Mann and his co-workers at Rochester, Minn. These workers transplant the duodenum so that the alkaline duodenal fluids empty into the ileum, and attach the jejunum to the pylorus by means of an end-to-end anastomosis. The first part of the jejunum is thereby exposed to the continued and unneutralized action of the gastric juice. Ulcers are said to form in 100 per cent of the experiments. Dr. Mann now has 200 such specimens, and bacteria played no role in the formation of these ulcers. This suggests that instead of considering peptic ulcer as a constitutional disease, which is, at present, the tendency in certain quarters, we should center our attention more on the local lesion.

We are nearly as ignorant of the cause of its chronicity as we are of its etiology. With the sole exception of the ones just mentioned, all experimental ulcers



heal rapidly. Similarly, the majority of human ulcers heal spontaneously without medical treatment. The medical profession does not see many of these cases, for the ones which come to us come for the relief of symptoms. Most of them have undergone periods of remission and exacerbation, and during the periods of remission, the ulcer may have healed completely, or it may have been merely in a quiescent stage. Similarly, in treating an ulcer, we are never quite sure whether it has become healed, or just symptomless.

The various forms of treatment employed by the older men, such as Riegel and Leube, were empirical, and were based upon the fact that the results obtained were "beneficial." "Beneficial results" is a hackneyed phrase in medicine. Chiropractors can talk about "beneficial results." If we do not have a more rational basis for treatment than this, we may not have a very rational one after all.

It is commonly assumed that if we relieve the symptoms of an ulcer the result is good. This has been the logic for the vast majority of treatments. One man gets results from one treatment, and another man from another treatment. In reality, relief from pain is not a satisfactory index of cure, for the ulcer simply may be thrown into a period of remission and sooner or later flare up again. These different types of treatment have taught us that, in the majority of cases, the symptoms can be temporarily relieved, and probably in some, permanently relieved, by the employment of any of these different methods.

As a matter of fact, hospital ward diet is usually enough to bring about relief of symptoms. This is repeatedly observed at the County Hospital in Chicago. We recently had a patient with a prepyloric ulcer, high grade pyloric obstruction, and marked gastric retention. After three months of ward diet, he suddenly died from pulmonary embolism. At autopsy, the ulcer was found to be healed. We cannot assume from this that ward diet is the treatment *par excellence* for ulcer, nor can we assume that any other treatment is the ideal treatment merely because it has relieved the pain or even allowed the ulcer to heal. No reliable statistics exist as to the permanency of the results obtained by any of the forms of medical treatment. Is there any other basis for our therapy? Is there any treatment which is based on sound theory?

There is one well known treatment which claims to be based upon established physiological principles, but which in reality is not so based. The exponent of this theory assumes that the failure of the ulcer to heal is due to gastric motility and that with rectal feedings the stomach is kept at rest. This is incorrect. An empty stomach is an active stomach. Gastric motility and secretion continue. This treatment also recommends the administration of opiates at times for the relief of ulcer pain. I do not believe that this is ever justified, although, of course, the value of opiates in hemorrhage is well recognized.

The other treatment which claims to be based upon sound theory is the Sippy treatment, which assumes that the digestive action of the gastric juice constitutes the greatest hindrance to the healing of an ulcer. Ex-

periments now in progress at the County Hospital seem to show that the healing process can be delayed, and in some cases altogether prevented, by continued stimulation of the acid gastric secretion. Hydrochloric acid is the irritant which is responsible for the production of pain in the ulcer in the vast majority of cases. A relatively high concentration of acid may be required for the production of pain, whereas a lower concentration may interfere with the healing of the ulcer, but be insufficient to cause pain. This is a point which is not generally recognized. Now, a dietary treatment alone, especially if with milk and cream, may neutralize enough acid to stop the pain. Practically all of the treatments employed lower the level of the acid below the point necessary for the production of pain. The patient becomes free from pain, and he and the doctor both conclude that the treatment is a good one. Under such treatment the ulcer may heal; it may remain quiescent; it may hemorrhage; it may perforate. A painless ulcer is not necessarily a healing ulcer. But the Sippy treatment is the only one which endeavors to neutralize all of the free acid. Hence, when properly carried out, it not only relieves the pain, but it stops peptic activity and thereby does all that medical treatment can do, in the light of our present knowledge, to enable the ulcer to heal.

Dr. J. B. Beykirch, East St. Louis. (Closing): I appreciate the discussion. We have to individualize our patients. We must individualize our treatment. We can not just take a text-book or empiric way of treating each ulcer.

As to giving opiates, we give very few opiates; but the bromides are used to allay the nervous symptoms.

Other than that I haven't anything to add.

## STATUS OF MILK PASTEURIZATION IN ILLINOIS\*

LEWIS SHERE

Milk Sanitarian Division of Sanitary Engineering, State  
Department of Public Health,

SPRINGFIELD, ILL.

Pasteurization, when properly done, is recognized by health and medical authorities as the most practical, economical and positive method of preventing communicable disease transmission through milk. Authoritative scientists who have studied this process continuously for 25 years agree that heating milk to 142° Fahrenheit and holding at that temperature for 30 minutes will render it absolutely safe from all pathogenic bacteria. Pasteurization is an essential safeguard because it is impossible to be sure that the dairy cow or persons engaged in the production and handling of milk are free from disease at all times, even by means of the most efficient dairy inspections and medical examinations. In cities

\*Read before the Section on Public Health and Hygiene, Illinois State Medical Society, Champaign, May 19, 1926.

where pasteurization has become general, milk-borne epidemics have practically ceased to occur. The United States Department of Agriculture is responsible for the statement that "no epidemic of disease has ever been traced to properly pasteurized milk."

The recognition by the public of the value of pasteurization has resulted in the widespread use of pasteurized milk until today 98 per cent of all the milk used in cities in the United States having a population of 500,000 or over, is pasteurized. The general tendency in Illinois is toward the pasteurization of all milk except that which is certified or which has been produced under conditions similar to those which are employed in the production of certified milk. In Illinois, an estimated average of three-fourths of the milk is pasteurized in cities with a population of 30,000 or over, exclusive of Chicago. In Chicago about 99 per cent of the milk supply is pasteurized.

Pasteurization if not properly done may give the consumers a false sense of safety. There should be no argument that when milk is labeled and sold as pasteurized that it should actually have been properly pasteurized. Until recently only a very few cities in Illinois attempted to supervise milk pasteurization plants and there was practically no inspection or supervision of the sanitary features of such plants by any State agency or department. The Chicago Department of Health has made inspections of milk pasteurization plants since 1916 when steps were taken to more definitely enforce the pasteurization ordinance adopted by that city in 1908. The Rockford Health Department as a part of its good supervision of that city's milk supply for several years has made control inspections of the pasteurization plants. Other cities that have carried on more or less control of pasteurization plants are Decatur, Peoria, Bloomington and Aurora. The supervision of plants elsewhere in Illinois has been practically nil.

With the increasing recognition by the laymen as well as medical men of the value of pasteurization and, therefore, an increasing demand for pasteurized milk, the State Department of Public Health has been asked from time to time as to the sanitary quality of the milk from some of the pasteurization plants and whether or not the plants were so equipped and operated as to

assure that the milk was safer than raw milk. School officials who assume more or less responsibility when milk is furnished at schools for the children have especially been interested in this matter and sought the advice of the department. The owners of pasteurization plants in general have also felt the increasing demand for pasteurized milk and also the need of assurance that the pasteurization throughout the state was properly done so that at no time would pasteurized milk in any way cause or even be suspected of causing illness. As a result of these conditions, the medical, dairy and health interests cooperated in asking the legislature for a reasonable law which would make it possible for a consumer when purchasing milk labeled "pasteurized" to know that he was actually obtaining a clean safe milk that had been pasteurized in a plant properly constructed and equipped and operated in a sanitary and satisfactory manner. The 1925 legislature enacted such a law known as the milk pasteurization plant law, a summary of which follows\*:

1. Pasteurization is defined as the process of heating milk or milk products to a temperature of at least 142° F. and holding at such temperature for not less than 30 minutes.

2. Operators of pasteurization plants shall apply to the State Department of Public Health for a Certificate of Approval.

3. The State Department of Public Health shall prepare Minimum Requirements for the construction, equipment and operation and maintenance of pasteurization plants.

4. Certain provisions for the sanitary quality of the raw milk which is to be pasteurized are made.

The more important minimum requirements prepared and adopted by the State Department of Public Health in accordance with the law and which a plant must comply with in order to receive a certificate of approval are as follows\*:

#### CONSTRUCTION

*Building.* The building shall be provided with smooth floors of impervious material and properly drained. The walls and ceilings shall be painted with a light colored paint or have other suitable sanitary finish. The plant shall be properly lighted and ventilated and shall be effectively screened against flies. Adequate toilet facilities shall be available for the persons in the plant and proper lavatory facilities shall be provided.

\*Copies of the law may be obtained from the State Department of Public Health on request.

\*Copies of the minimum requirements may be obtained from the State Department of Public Health on request.



The plant shall be provided with an accessible adequate supply of water of safe sanitary quality.

#### EQUIPMENT

*Pasteurizers.* Apparatus shall be such that the entire quantity of milk can be heated to a temperature of at least 142° F. and held at that temperature for at least 30 minutes. Pasteurizers shall be such that every particle of milk will be held at the required temperature for the required period of time.

*Time and temperature recording devices.* Pasteurizers shall be equipped with accurate recording devices to show the temperature to which the milk is heated and the period of time for which it is held.

*Coolers.* Facilities shall be provided to promptly cool the milk after it is pasteurized to a temperature of 50° or less. Open surface coolers shall be provided with tight fitting covers.

*Bottle fillers and cappers.* A suitable, completely closed bottle filler and a mechanical or hand-operated machine capper shall be provided.

*Milk piping, pumps and accessories.* Piping, fittings, valves and pumps shall be of the sanitary type, shall be constructed of non-corrosive metal, and shall be such that they can be all taken apart and cleaned with a brush. The arrangement of piping and equipment shall be such that pasteurized milk cannot be passed through piping, pumps, or other apparatus which earlier in the run has been used for raw milk and by-passes and cross-connections in the piping shall not exist. All apparatus in which milk is stored shall have tight-fitting covers.

*Washing and sterilization of containers.* Facilities shall be provided to properly wash and sterilize the bottles and cans. Facilities shall also be provided to thoroughly dry the cans. If the bottles are not filled as they come from the sterilizer they should be stored in an inverted position until they are to be used.

#### OPERATION AND MAINTENANCE

*Health certificates.* Every person employed in the plant coming in contact with pasteurization or bottling processes or the washing and sterilization of the equipment shall furnish a certificate from a competent physician showing he is free from any disease capable of being carried in milk.

*Sediment test.* All milk or milk products to be pasteurized shall not yield more than a perceptible amount of sediment or stain other than that of natural butterfat, when a pint sample is filtered through a cotton pledget one inch in diameter. This test shall be made of each producer's milk at least once each month.

*Filtering or clarifying.* Milk shall be filtered or clarified before pasteurization.

*Cleaning and sterilization of pasteurization equipment.* All pasteurization equipment, including all pipes, pumps, etc., shall be thoroughly cleaned and sterilized after each day's usage and shall be effectively sterilized in the morning just previous to the day's run.

The State Department of Public Health through its Division of Sanitary Engineering is

now making inspections of plants in compliance with the law. The owners are informed wherein their plants do not comply with the law and minimum requirements and then a reasonable length of time is given in which to carry out the necessary changes or improvements.

There are now 349 milk pasteurization plants in Illinois, exclusive of those plants which sell their product solely in Chicago. Up to April 15 of this year inspections and reports of 212 of these plants had been made. It was found that conditions at the plants ranged from very good to bad. The reason for many plants being decidedly unsatisfactory is partly because of lack of any control by local medical or health agencies and partly because of the lack of knowledge and sometimes indifference of the owners.

No plant on first inspection was found to comply with the law and minimum requirements in every respect, although there were quite a number which were satisfactory with the exception of a few minor items which were promptly taken care of by the plant owners.

Table 1 indicates the conditions as they existed with reference to the construction of the plants.

TABLE 1. SHOWING ITEMS OF CONSTRUCTION WHICH WERE FOUND UNSATISFACTORY  
NUMBER OF PLANTS INSPECTED\* 212

	Number	Per Cent
Floors—not smooth, impervious or properly drained .....	20	9
Walls and ceilings—unsatisfactory .....	58	27
Doors and Windows—unsatisfactory facilities to eliminate flies .....	24	11
Water supply—doubtful or suspicious sanitary quality .....	61	28
Toilet facilities—unsatisfactory .....	85	40
None, 41; Insanitary privies, 44.		
Lavatory facilities—unsatisfactory .....	90	42
None, 59; Inadequate, 31.		

While the construction of a plant is important, it is the equipment which is the most important in determining the ability of a plant to produce a safe product. It is true that proper equipment without the proper operation will not insure a safe product but with the best operation it is impossible to be sure of a safe product unless the equipment is properly designed. Therefore the equipment of any pasteurization plant is a most important feature.

Table 2 shows the number of pasteurizers in use at the plants inspected and the number which

\*To April 15, 1926.

were defective or improperly equipped with necessary recording thermometers.

TABLE 2. SHOWING NUMBER OF UNSATISFACTORY PASTEURIZERS AND NUMBER OF PASTEURIZERS WITHOUT RECORDING THERMOMETERS  
NUMBER OF PLANTS INSPECTED 212

	Number	Per Cent
Commercial pasteurizers .....	295	..
Mechanically defective .....	234	79
Not provided with recording thermometers....	128	43
Provided with recording thermometers, but out of repair or unattached.....	26	9
Plants using cream cans for pasteurizers.....	16	7
Commercial pasteurizers and improvised pasteurizers not equipped with recording thermometer .....	170	54

In addition to the heating and holding apparatus necessary to pasteurize the milk, there are many other items of equipment which must receive consideration if the product, once it has been made safe, is to be protected from subsequent contamination, before it is delivered to the consumer. Table 3 shows these various items and indicates the number of plants which were not properly equipped.

TABLE 3. ITEMS OF EQUIPMENT AND OPERATION WHICH WERE FOUND UNSATISFACTORY  
NUMBER OF PLANTS INSPECTED 212

	Number	Per Cent
Lacking sanitary piping or fittings.....	18	8
Piping with blind elbows, unsanitary pumps or with cross-connections between piping carrying raw and pasteurized milk or using the same pumps or piping for bath, raw and pasteurized .....	39	18
No proper bottle filler.....	20	9
Uncovered bottle fillers.....	70	33
Open surface coolers without covers.....	150	77
No adequate facilities for sterilizing bottles..	81	38
No adequate facilities for sterilizing cans....	44	20
No facilities for drying cans.....	121	57
No filters or clarifiers.....	86	40
Filtering or clarifying after pasteurization only .....	42	19
Number of plants not filtering or clarifying before pasteurization .....	128	60
No proper cappers .....	71	33
No medical examination of employees in plants .....	211	99

These facts indicate the status of the pasteurization plants in Illinois at the time pasteurization plant control was undertaken by our department. It is quite evident that definite standards for pasteurization are important and their enforcement necessary. Definite requirements have been formulated and are being enforced as quickly as the necessary inspections can be made. Those plants which have been inspected are promptly making the necessary changes, additions and improvements in order to comply with all of the requirements and as quickly as the

first inspections of all the plants have been completed, reinspections will be made and only those plants which meet the minimum requirements in every detail will be issued a certificate of approval. Plants which do not comply with the recommendations made in order that they should meet our minimum requirements will be ordered to discontinue operation.

The minimum requirements as drawn up, are based on present knowledge regarding milk pasteurization equipment and operation and are subject to changes and additions if further facts or information or future scientific studies show the need for same. We must recognize that there is study yet to be done in order to make pasteurization under commercial conditions as nearly perfect as possible. Much research has been done to determine the efficiency of various commercial pasteurizers. The most recent research work was probably that which was carried on at Endicott, New York, which includes studies of the efficiency of different types of pasteurization equipment under actual commercial operating conditions and as a result of these studies, recommendations for remedying several defects generally found in present apparatus were made.

There are certain problems which have not been solved and there is at the present time considerable research work being done by some state, city and federal departments on commercial pasteurization equipment.

The more important problems which call for research and which are receiving attention at present are:

1. *Recording devices.* Devices are not available to record the actual length of time for which the milk is held at proper temperature. This is especially true in installations having the pocket-type pasteurizer or the continuous-flow pasteurizer.

In the case of the pocket-type of pasteurizers, it is not possible to determine from the recording thermometer charts for just what period of time the milk is actually held at the required temperature due to the fact that part of the filling period, the holding period and part of the emptying period are all recorded as one operation. In the case of the continuous flow pasteurizer, the recording thermometers do not furnish a means of checking the rate of flow. They are simply a means of determining the temperature



to which the milk is heated and the temperature at which it is held.

2. *Leaky valves.* It is practically impossible to design a valve which will be positively leak-proof at all times, therefore, it is necessary to so arrange the equipment that the connection can be broken between the holder and the raw milk line during the holding and emptying periods and so the connection at the discharge valve can be broken during the filling and holding periods. A device should be designed to record this procedure.

There should also be provided a means of sterilizing the discharge valve just previous to making the connection with the pasteurized milk line. This will eliminate the danger of contaminating the pasteurized milk, in case any milk has seeped through the discharge valve.

3. *Foam and splash.* Considerable foam accumulates on the top of the milk, during the process of pasteurization, especially in vat or tank holders. Splash on the covers occurs in vats of the horizontal coil type of pasteurizers. If the splash or foam is not maintained at as high a temperature as the milk, it is questionable if the entire product is properly pasteurized. Just how much these items affect the effectiveness of the process is a question for research.

The possibilities of research problems relating to the efficiency of commercial apparatus are pointed out here to indicate the intensive study which has been and which is continually being made to make commercial pasteurization of milk even more efficient and effective than at present. Much work is being done on the more important problems and their early solution is assured.

The State Department of Public Health in its milk pasteurization plant work is earnestly endeavoring to carry out the wishes of the general public as expressed through the members of the legislature. The inspections and certificates made and issued in accordance with the law can and will assure that the pasteurization plants are so constructed and equipped that the milk supplied by those plants will be safe if the routine daily operation conforms to that prevailing at the time of inspection. From our contact with the owners and operators of the pasteurization plants we know that the vast majority of such owners and operators sincerely desire to so maintain and operate their plants that the products produced will always be of the highest standard and safety

for human consumption and that they welcome at all times inspections, assistance and constructive criticism from medical and health authorities. All of our milk supplies, however, will not be clean and safe for human consumption at all times until the vast majority of the milk buying public join with the medical men and purchase only the cleanest and safest milk that is available in the local market and also when local medical and health control over milk supplies has been extended over that which now prevails. Annual inspections by the state cannot and should not be considered as taking the place of inspections and control by local medical associations and health departments, but rather should serve as a guide to local control and a step toward standardization of local control throughout the state insofar as such standardization is desirable.

Milk is one of our most important and valuable foods and is now regarded as indispensable as a food for children. Its consumption undoubtedly will increase more in proportion than the increase in population. Our milk supplies are now safer than they have ever been before. The passage and carrying out of the milk pasteurization plant law has already and will continue in the future to make further marked improvements in the quality of many milk supplies. Still further improvements will come when all cities have adopted and enforced a good milk ordinance such as the Illinois ordinance already adopted by cities, or the standard ordinance recommended by the United States Public Health Service which has been adopted as a state model by ten states. Pasteurization was never intended to be a means for making dirty milk safe and it has been gratifying to note from our inspections that the owners and operators of the better pasteurization plants have been requiring that the raw milk brought to those plants shall be as clean and as of good sanitary quality as the average milk sold as raw milk. Special attention is called to the fact that one of the minimum requirements mentioned previously in this article deals with the cleanliness of the raw milk brought to the plants and, therefore, the enforcement of the pasteurization plant law assures a clean milk which is pasteurized only to destroy any disease producing organisms which may accidentally be in the raw milk even when all reasonable practical care and sanitary requirements have been fulfilled at the dairy farms. The medical profession can, there-

fore, conscientiously advocate the use of pasteurized milk, knowing that the milk brought to the plants is as clean and probably cleaner than the vast majority of raw milks on the market.

#### DISCUSSION

Dr. R. C. Cook, State Department of Health, Springfield: I do not believe we can afford to let this paper go by without some discussion, because I am sure it appeals very strongly to many of us.

In the beginning, Mr. Shure included in his paper the statement that properly pasteurized milk is safe and gives us thorough protection against all pathogenic germs. That is the argument that we are giving to people of the state of Illinois, that pasteurized milk is safe, the people are believing us and we are believing it ourselves. According to the statements given us by the inspector, Mr. Shere, we find a very small percentage of milk is thoroughly or properly pasteurized. With this information brought to our attention we find we have been deceiving ourselves to a very great extent. I think it is very important that this law has been passed and that these pasteurizing plants are going to receive inspections. I realize also that the department expects these plants to live up only to the minimum requirement and yet after hearing this paper I doubt whether we should be satisfied with the minimum requirements for too great a time. In my limited experience meeting men who are running pasteurizing plants, I find some who are enthusiastic about their product; they take all the interest in giving the people safe milk that the good conscientious doctor does in prescribing for his patients.

On the other hand, I have met a few men who are interested in getting a cap on their bottle which says "pasteurized milk." I went to one small town where it was said there was a pasteurizing plant in town, and when I called on this individual found he was pasteurizing milk in a can that was used to make ice cream. He had no control thermometers of any kind. After talking to him I found he was a graduate of one of the larger universities' dairy department and had considerable experience. He freely admitted to me he knew his product branded as pasteurized milk represented practically nothing. His argument was that he hoped to make enough money to buy and operate in a modern plant.

Dr. T. L. Leonard, Assistant Director State Department of Health, Springfield: I might discuss some of the more important ideas as set forth here in order to emphasize them.

I am wondering if you all heard the statement of the tremendous amount of milk that is now being pasteurized. Mr. Shere states that about seventy-five per cent. of the commercial milk in the state is pasteurized. I had estimated the amount to be about sixty per cent. I think that pasteurizing of milk is increasing every day, and I heard a gentleman state in East St. Louis the other day that he thought all the milk in the state would be pasteurized within the next five years. That may be a little early, but we who have been marking the progress feel that it is a conservative statement.

The most important item, I think, to emphasize at this time, is the matter of the medical profession urging the use of pasteurized milk. Most of us who have visited cities where the physicians are called on, find that the physician himself has notions that milk in the raw state that is clean is preferable possibly to the pasteurized milk. I met one health officer in the northern part of the state who has a good practice, and his practice was limited to the care of women and children, and he stated that when he could get raw milk for his people he preferred it. Now, I think these men are conscientious, I think they believe what they state, but I believe if they had an epidemic they would find that they would be safer with pasteurized milk. There is nothing in the pasteurization process that physicians should worry about, or that the patient will lose in the process. There may be some loss in the anti-scurbutic element, where the temperature is raised higher than that suggested by Mr. Shere. You hear people say they like the taste of raw milk, but they feel pasteurized milk is safe, and when you hear them say pasteurized milk has a taste we know it has been heated higher than it should be. Pasteurized milk has no more taste than raw milk when properly pasteurized.

The recent law passed by the state legislature standardizing pasteurization is a splendid measure, and I think one of the best features of that law is the fact that it requires medical inspection of the person working with milk in the pasteurization plant or handling milk. I believe we will discover more carriers of typhoid fever with this inspection system throughout the state than any other method we could adopt to search out carriers and especially those handling foods. It has been our custom so far to get a specimen of the stool and urine of all persons who give a history, no matter how long previous to the time of the inspection that they have had typhoid fever. In one of the states in the southern part of the United States they have been making these medical inspections of handlers of milk, and I think they have found to date something like fifteen carriers, and I imagine we will have the same experience in this state in time.

As the essayist stated, properly pasteurized milk is safe, but it is like serving milk from cows that are diseased, we prefer to have milk come from cows that are pronounced free from disease by the proper authorities, and we prefer even in drinking pasteurized milk and in serving any food to know that that food has come from persons who are not carriers of disease.

The essayist touched on the subject of regulating commercial milk by ordinance in cities. I think the last report we had a few days ago there are now fifty-seven cities that have enacted an ordinance and the cities of Urbana and Champaign will enact an ordinance soon, as at the last meeting of the city council in Urbana they took favorable action and the committee was asked to bring in a report at the next meeting in two weeks, and Commissioner Franks, Champaign, advised us that just as soon as Urbana acts the city of Champaign will adopt the same ordinance. They have agreed to employ a milk inspector, possibly one



of the students in the University of Illinois, who will act as milk inspector in this district. You might be glad to know that with the exception of three of the larger cities of the state, all of the balance of the larger cities in the state of Illinois have passed a milk ordinance. Some go a little beyond the state ordinance.

Joliet has passed an exclusive pasteurized milk ordinance, that is, all milk must be pasteurized except the raw milk being delivered from the country from the producer to the pasteurizing plant, that comes to town in a raw state.

There are about fourteen pasteurizing plants in Rockford, that is fourteen people who are delivering milk in that city whose milk is classified as pasteurized; there are two distributors delivering certified milk.

Many people will say yes, the milk in this town is certified and they have the impression that certified milk is coming from herds where the cows are tested for bovine tuberculosis and the veterinarians have certified the herds are free from bovine tuberculosis. Of course that is an error. Certified milk is a trade name and it is copyrighted. No one has permission to use the term certified milk unless you have permission of the copyrighters; the only people entitled to use the term are the American Medical Milk Commission or the commissions in the various parts of the United States, and the milk is produced under the standards of the American Milk Commission.

I think milk is receiving much more attention from all of the cities; for instance, we have in Springfield, as Mr. Shere stated a moment ago, producers and distributors that are really requiring more than any law or any ordinance covering the subject—the Illinois Dairy Company in Springfield employ three milk inspectors to go out into the producing territory and inspect the dairies and educate the producer in coming up to certain standards required by the Illinois Dairy Company, and then the milk is purchased on a sediment test as it arrives at the dairy, plus a cream test. This is a service that is paid for by the Illinois Dairy. These men cost money, and this is a service that they are putting into their milk without any ordinance.

I am glad to tell you that ninety per cent. of the milk in Springfield is pasteurized without any ordinance. Dr. Brokaw, the health officer, is at the present time considering an ordinance and Springfield will very likely cover their commercial milk with an ordinance during the present year.

## CATARACT

(Facoerisis\*)

W. A. FISHER, M. D., F. A. C. S.

CHICAGO

Facoerisis consists in grasping a cataract with a suction apparatus and removing it within its capsule, leaving a clean, round, black pupil. If this method can be accomplished without complications and without a full iridectomy, one

would think it should be the operation of choice, as it can be performed without waiting for the cataract to ripen, eliminates secondary operations, lessens prolapse iris, and is practically free from post-operative inflammation. Some claim it has a special technique, but the difference between facoerisis and other methods of operation appears to be only in the mode of grasping and removing the lens.

In the hands of Barraquer, who has brought the technique of facoerisis to its greater perfection, the operative manipulations have become a matter of routine, and are carried out with a very small percentage of complications; but such facility and such a large practice in this method cannot be easily acquired by the average ophthalmic surgeon.

If a method could be devised to familiarize surgeons with the suction apparatus, apart from practicing upon human eyes, the operation would become as simple as other methods. I believe this experience can be obtained by removing the lens of a chicken, placing it upon a table and practicing manipulations with the suction apparatus. Machines devised for removing cataracts by facoerisis should be mastered, if possible, before operating upon human eyes. All seem dangerous at first, many skillful operators rightly hesitating to work in this manner, but fear lessens as skill is gained with practice upon the chicken lens.

Ophthalmic surgeons are looking for some practical intracapsular technique since so much has been written recently regarding post-operative inflammation following the capsulotomy operation. Operators have known for a long time that clinically, post-operative inflammation occurs more frequently after the capsulotomy than after intracapsular methods.

Nugent<sup>1</sup> has emphasized the danger of retained capsule and cortical and has cited the literature regarding it: Schirner,<sup>2</sup> Uhlenhuth,<sup>3</sup> Kraus,<sup>4</sup> Lagrange and Lacosta,<sup>5</sup> Straub,<sup>6</sup> Verhoff and Lemoine,<sup>7</sup> Macdonald and Lemoine,<sup>8</sup> Gifford,<sup>9</sup> Fisher,<sup>10</sup> Fisher and Holland.<sup>11</sup>

Nugent concludes, by stating, that in his opinion, facoerisis is the coming operation.

Hartshorn<sup>12</sup> states that general practitioners should be informed regarding treatment of senile cataract and gives an extensive bibliography. General practitioners often decide that a patient with cataract should wait until he is blind before

\*Read before Section on Eye, Ear, Nose and Throat, Illinois State Medical Society, Champaign, May 19, 1926.

being operated on, because almost all text-books and many oculists recommend that method.

The danger of facoerisis is freely criticized by those opposing intra-capsular operations, but in doing so, the danger of retained capsule and cortical, secondary operations, prolapse of iris and post-operative inflammation are not particularly stressed.

A good surgeon operating by an unfamiliar technique should not expect as good result as he would have if he were more familiar with the method. To report such results is not stimulating progress, but doing actual harm. It would be far better not to report such cases, but adhere to a technique with which one is familiar, or master the new before rushing into print with a few unsuccessful cases.

Competent surgeons with enormous experience, omitting some necessary part of the technique of a new operation, often have disastrous results.

It will be interesting in connection with this to quote the results reported in some recent literature:

Cruikshank<sup>13</sup> reports 117 facoerisis operations with 3% vitreous loss. Wright<sup>14</sup> reports 250 facoerisis operations with 9% vitreous loss. These two surgeons, operating in India, should have practically the same results, but Wright must have omitted some little point in Barraquer's technique, as he and Cruikshank are admitted to be competent operators.

Elschnig<sup>15</sup> operated on 75 cataracts by facoerisis without the loss of an eye. He says the instrument is difficult to maintain in perfect running order and that facoerisis is more difficult than capsulotomy; he also states that complications after facoerisis are fewer and post-operative inflammation less frequent. He advises facoerisis in: First, immature cataracts; second, hypermature cataracts; third, in relatively young subjects. He believes capsulotomy quite as good as the intracapsular method when the lens is mature, but not in hypermature. He also recommends a conjunctival suture.

McPheill<sup>16</sup> cites 17,000 operations, cutting the capsule with point of cataract knife. McPheill practiced Smith's operation for a long time but gave it up on account of too frequent vitreous loss. In 1923 he had 1.6% failures, 1.2% from suppuration and 0.4% from hemorrhage. He does not give percentage of needlings, post-

operative inflammation, prolapse of iris, or losses from other causes.

Borello<sup>17</sup> makes a preliminary iridectomy and holds the operator who does not operate in this manner responsible for any damage that might occur if the extraction is made in one stage.

Marques<sup>18</sup> thinks total extraction, which in recent years has become the fashion, will pass just as it has come, until it will only be spoken of as an historic souvenir.

Bagot<sup>19</sup> spent two months with Barraquer and had both his own eyes operated on. All the patients he saw operated on recovered as if by magic and he himself made a perfect recovery. He saw none of the complications feared by oculists. He thinks the Barraquer method<sup>20</sup> is the greatest perfection which the cataract operation has reached since the immortal discovery of Daviel.

Finley<sup>20</sup> reports 50 facoerisis operations with 30% vitreous loss, but blames his lack of experience rather than the method. In spite of this, the visual results were satisfactory. He then operated on 75 by the Smith method with 12% vitreous loss.

Wolf<sup>21</sup> states that despite the excellent results obtained by some with intra-capsular operations, the majority of conservative American surgeons believe the risk too great. He says it must be emphasized that facoerisis is not an easier method for the surgeon, but requires more exact technique than the capsulotomy operation. He also states that if facoerisis can be done without complications, the surgeon has accomplished the utmost in cataract extraction.

Higgins<sup>22</sup> gives the histories of 11 facoerisis operations and believes it the operation of choice.

Woodruff<sup>23</sup> reports his first 6 facoerisis operations claiming good results.

#### *Conjunctival Flap:*

The value of a conjunctival flap and prior suture in connection with the cataract operation is emphasized by many operators.

Verhoff<sup>24</sup> describes a conjunctival flap in 1916 and Derby made a modification.

Salva<sup>25</sup> states that in 172 cataract operations with conjunctival bridge he had no iris prolapse and only three incarcerations.

Würdeman<sup>26</sup> recommends suturing the conjunctiva after cataract operation.

White<sup>27</sup> uses conjunctival suture where the condition indicates a possible vitreous loss.



Joogs<sup>28</sup> and also Van Lint<sup>29</sup> praise the advantages of a conjunctival suture.

*Facoerisis Methods:* The three best known facoerisis machines differ slightly, but each is a suction apparatus:

1. The Barraquer apparatus (made in Barcelona, Spain) is an electric suction machine with vibrations and gives instant contact.

2. The Green apparatus (made by V. Mueller and Co., Chicago) is an electric suction machine without vibrations giving slow contact.

3. The Downs apparatus (made by Downs, London) is a mercury suction machine without vibrations giving instant contact.

The technique of facoerisis with these different machines is quite similar, but Barraquer<sup>30</sup> insists that all details of his technique are necessary if good results are to be expected.

In preparing a patient for facoerisis, the surgical rules for a cataract operation must be observed. The stages of the operation are as follows:

(a) In order to dilate the pupil an ointment of 5% cocain and 5% euphthalmine is inserted between the lids 45 minutes to 1 hour before the operation and the eyes kept closed. If the pupil is not then well dilated, more time must be given.

(b) The eye is then anesthetized in the same manner as in any cataract operation; most operators instill 4% cocain, repeated in 5 minutes and a third instillation in another 5 minutes.

(c) Fifteen minutes before the operation is begun 2% novocain is injected to paralyze the orbicularis. Poyales of Madrid, Spain, injects 9 cc. in three places: First, at the outer side of the eye beginning on a level with the eyebrows, using a needle 50 mm. long, passing the needle downward and injecting 3 cc. as the needle is withdrawn; secondly, the same amount is injected below the lower lid; and thirdly, 3 cc. are injected from the outer side of the eye straight down in the direction of the ear. Barraquer<sup>30</sup> injects novocain in this same manner, but less of it. Green<sup>31</sup> uses deep orbital anesthesia. The injections may annoy the patient a trifle, but paralysis of the orbicularis is very desirable.

Prof. Vila Coro of Barcelona, Spain, has discontinued novocain injections but instills 4% cocain three times at 5 minute intervals, and just before beginning the operation instills 2 drops of a 50% solution of cocain in 1/1000 adrenalin.

He contends that the paralysis is as complete as that produced by the injection of novocain.

(d) A suture is placed in the upper and lower eye lid laid out of the way in the inner angle of the eye, ready to be tied when the operation is finished. This is done because of the paralysis of the orbicularis.

(e) The erisofaco tip is sterilized by boiling and holding over a flame, then covered with a sterile towel.

(f) The section is made with a conjunctival flap which is turned down, in order to see the iris, then a small peripheral iridectomy is made.

(g) A conjunctival suture is inserted, a surgical knot is made but left loose and placed out of the way for lens delivery.

(h) The conjunctival flap is raised, the erisofaco is placed flat upon the lens and the suction is applied without pressure upon the lens or the slightest movement of the hand. According to Barraquer<sup>30</sup> the lens is slowly turned upside down and drawn very slowly from the eye, bottom side first. Green<sup>31</sup> draws the lens out top side first using  $\frac{1}{2}$  tractions and  $\frac{1}{2}$  pressure.

(i) The conjunctival suture is tied, the spatula used to straighten out the conjunctival flap and adjust the iris which has contracted, and the pupil is seen round and black. With the suture in place, the toilet is deliberately made.

(j) Eserin ointment  $\frac{1}{2}$ % is inserted between the lids.

(k) The lid sutures are tied, yellow oxide of mercury ointment, eight grains to the oz applied to the closed lids and both eyes are bandaged.

#### *Lid Control:*

Fisher's lid hooks<sup>32</sup> have many advantages but any lid retractor would seem safer than the best eye speculum.

*After Treatment:* Twenty-four hours after the operation, the patient can be up, the bandage is changed, the lid suture is removed and he is given one eye to go about.

The third and fifth day the bandage is again changed and if the lids are not swollen, a bandage is reapplied to the eye operated on.

The seventh day the eye operated on is inspected for the first time; if the conjunctival sutures are intact, they are removed, but they often come away with the dressing.

If no complications have occurred, the patient may be dismissed with a shade.

Bruns of New Orleans, U. S. A., Poyales of

Madrid, Spain, and Fisher of Cairo, Egypt, operate for cataract, send the patients home in a cab or street car and have them return every two days for treatment. They report equally good results from this manner of after-treatment as in those remaining in the hospital three weeks.

**Complications:** If the pupil contracts smaller than the erisofaco after the incision is made or blood obstructs the view, or, if the erisofaco slips from the lens, it is well to finish the operation by the Smith method, although Barraquer prefers to release the vacuum and commence over again. If the capsule is ruptured or vitreous is lost, it is advisable to insert a conjunctival suture on either side of the first one, then deliberately remove all capsule or cortical from between the sutures which can be more readily seen by the aid of a blue light.

#### CONCLUSIONS

1. Facioerisis if properly done seems to be the best operation for all kinds of cataracts, except dislocated lens, but it must be emphasized that it is not as simple as capsulotomy. Complete anesthesia, paralysis of the orbicularis, efficient lid control and a good light are necessary, and are also desirable in any method of operating.

2. Post-operative inflammation seldom follows an uncomplicated facioerisis operation.

3. Detention in the hospital is reduced.

4. The technique of facioerisis is simplified by practice upon chickens' lenses.

5. Six weeks old kittens give quite good practice for the capsulotomy method and also for the Smith, Knapp, Torok, Verhoff, Wright, Sinclair and Fisher intra-capsular methods.

6. Facioerisis operators should be familiar with, and favorable to, the Smith operation, because it is usually quite necessary to employ the Smith Technique if a complication occurs while doing facioerisis, such as:

- (a) Slipping of the erisofaco from the lens after the lens has been dislocated.

- (b) Too great contraction of the pupils after the incision is made.

- (c) Blood in the anterior chamber obscuring the pupil, or, if for other reasons the operator decides not to do facioerisis.

7. From recent literature a conjunctival suture seems desirable, but it must be emphasized that it is not a simple procedure.

8. The above conclusions are not based upon

a few operations or upon a few hundred. The experience of four seasons in India and operating upon more than 2,500 eyes by the intra-capsular method, permits me to state that some form of intra-capsular operation will produce better results in a competent surgeon's hands than the capsulotomy operation, and that facioerisis, properly performed, is the ideal operation but not the simplest.

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#### DISCUSSION

Dr. Oscar B. Nugent, Chicago: Dr. Fisher's paper is so different from text-book teaching that a few of the points mentioned should be emphasized. Last March I presented a paper before the Chicago Ophthalmological Society portraying the dangers of retained cortical following capsulotomy extraction, and cited the literature on the subject. The trend of opinion in the literature was toward the intra-capsular extraction of cataract, and my conclusions were that intra-capsular extraction was by far the best method of



operation, and that of all the various forms of intra-capsular extraction, from my personal observation, facoerisis is the operation of choice. The danger of free lens cortical in the eye following capsulotomy extraction, the desirability of operation before the cataract becomes ripe, the elimination of secondary operations, the lessening dangers of prolaps iris, and the freedom from postoperative inflammation are some of the points which in time will force oculists to do intra-capsular extraction instead of capsulotomy. The success in facoerisis lies in the thorough knowledge of the working of machinery involved, and following in minute details the instructions and recognized technique of the operation and the pre-operative preparation of the patient. This can be accomplished by practicing the manipulation of the erisifaco with chicken lenses as suggested by Dr. Fisher. I believe too much cannot be said concerning the familiarizing of one's self with the use of the erisifaco before an attempt is made to employ it in a cataract extraction. The amount of force necessary to deliver a lens with the erisifaco is so slight that it is scarcely perceptible to the well-trained operator. Therefore the prospective operator must practice its use with some artificial device, and use it sufficiently to inspire his confidence in his ability to insure a safe delivery. A perfect contact must be made between the erisifaco and the surface of the lens in order to insure the formation of a vacuum which is necessary for the proper purchase on the lens. The chicken lens furnishes a good subject for practice, it being very nearly the size of a cataractous lens, about  $7\frac{1}{2}$  mm. in diameter. I have a device which furnishes a chance to practice the turning of the lens and extracting it through the pupil. It may be called a practice eye and consists of a glass barrel into one end of which is inserted an artificial iris made of dental rubber dam with a pupil 6 mm. in diameter, under which is a small rubber sac filled with water, representing the cataract. The sac is 8 mm. in diameter, being made larger than the pupil to furnish a slight resistance upon delivery, corresponding to that furnished by the tearing of the zonula. The only criticism to this device is the necessity of making slight pressure with the erisifaco upon the lens in order to perfect the contact, because the water bag is round and not so flexible as a cataractous lens. I hope to overcome this discrepancy in the near future. The six weeks old kitten's eyes which we have found to be so valuable in teaching the Smith-Fisher operation are of no apparent value in practicing facoerisis. I am thoroughly convinced that any operator who has done enough cataract extractions by any other method to insure a good incision can learn to extract a cataract by this method if he will practice facoerisis with the artificial devices herein mentioned, and thereby give the patient the benefit of all of its advantages. Barraquer instructs beginners to select an old patient with a senile cataract, mature and in excellent condition, for the first operation; not to change in the least possible way the details of the technique described, and to be most exact in following them out; if the flap, the iridectomy, the application

of the suction cup, or the preparation of the patient has not been correct, or if at any stage of the operation difficulties arise, do not persist in facoerisis in the first cases, but terminate the operation by the usual method. There are several points in the operation to be emphasized: The preparation of the patient; paralysis of the orbicularis; suturing of the lids; conjunctival flap and suturing of same; peripheral iridectomy; and control of the lids with a good lid retractor in preference to an eye speculum. Facoerisis is by no means as simple an operation as capsulotomy, and anyone contemplating its use should be capable of performing the Smith operation, so that in the event some unforeseen accident occurs, making it advisable to discontinue facoerisis, he could complete the operation by the Smith method. This can be well mastered by practicing the operation on the eyes of six weeks' old kittens, as has so often been advocated by Dr. Fisher.

Dr. George Francis Suker, Chicago: The cataract operation you all do to my mind is safe in almost anyone's hands who has common sense, but the objection to the majority of operations is primarily the corneal section. I think the majority of failures are due to not having a proper corneal section. The puncture is too often not at the extreme edge of the scleral side of the limbus. The knife should be held at right angles to this corneal plane when puncture is made, not on a parallel, thus obtaining a maximum diameter of the incision. This is particularly so when the counter puncture is similarly faulty. This is an essential factor in doing any cataract extraction, Barraquer, Smith, or any other type. If you should by any mishap get your knife in so that you see you are not at right angles, twist the knife about  $\frac{1}{2}$  mm., then you will get a square puncture. The counter puncture is also to be considered. This should be almost as far in as for the Smith. In order to obtain a nice conjunctival flap use a two per cent. solution of novocain subconjunctivally, getting a fair sized bleb, and before same has disappeared make your corneal section and your flap is easily made.

I am in favor of intracapsular extraction and very partial to the Kalt method. I have not used the Barraquer method so cannot discuss it, but certainly any intracapsular cataract operation, if properly done, will in the long run give better results. So far as vitreous loss is concerned, that is a matter of personal experience, and I doubt very much if the vitreous loss is greater than in any other type of cataract extraction. There is this to be remembered, that in some instances you will get what appears to be a secondary cataract because of a thickening hyaloid membrane. It seldom gets sufficiently opaque as to require a dissection.

The akinesis, I think, is an admirable procedure. I would advise all of you who are not doing as many cataract operations as Fisher to employ it; you are a good deal safer with it. It does not make any difference what you may say, the ideas Fisher has about cataract extraction are not to be questioned. He is

as well qualified to speak of these methods as Smith is about his extraction.

Dr. Wm. Fisher, Chicago (closing): I did not expect much discussion on this paper because the title of the paper is not found in text-books, dictionaries or encyclopedias. I am glad Nugent stresses a number of things regarding the technique, because the entire technique should be followed if the gentleman who devised facoerisis is to have any credit. It is not fair to use half of any technique and omit the other. Coming down on the train today one of the oculists told me he had used facoerisis on one case but was not very successful, that the iris was caught in the cup and when he removed the lens he removed most of the vitreous. I asked him about the details of the operation and he had, in reality, used no part of the correct technique and still called it facoerisis.

Suker made a very good point regarding the incision. He is always practical and usually right. Every operator knows that without a good incision one cannot do a good cataract operation by any method.

I believe the forceps are more difficult to use than facoerisis. There is another serious objections to forceps. Anyone, no matter how skillful, often ruptures the capsule and if one uses the forceps and draws the lens out top side first, there is great danger of having the iris forced out. If facoerisis is used, the lens is tumbled and brought up and out over the iris, thus reducing prolaps iris, which, I believe, is the bugbear of the cataract operation and is the cause of more lost eyes than vitreous loss.

## THE PALLIATION OF INOPERABLE CANCER.\*

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In the absence of definite knowledge concerning the nature and origin of cancer the only effective treatment promising cure is surgical removal of the growth. Within the last few years three other useful agencies have been added to the armamentarium, viz.: the x-ray, radium, and surgical diathermy. However, one item in the treatment of cancer which does not appear to have been given the emphasis it deserves, is the palliation of cases where a radical operation is impossible. The purpose of this paper is to create in the medical profession the feeling that even in incurable cancer cases much can be done for the patient without resorting to uncertain or useless agents and remedies. A fatalistic point of view and a therapeutic nihilism of the licensed

physician drive the unfortunate victim of cancer to quacks and charlatans.

Whatever may be the precise value of the nutritional theory of cancer genesis, enough evidence has been adduced to demonstrate that metabolism plays a certain rôle in the development of cancer. Therefore, much stress should be laid upon the systemic treatment of the incurable cancer and the necessity of building up the resistance of the cancer carrier.

The temperature of the water in the bathtub should be kept as low as possible without causing an unpleasant chilling of the body, as hot water causes hyperemia and thus may promote the rapid growth of an external cancer.

If the patient cares for massage, the region where the tumor is located should be carefully avoided by the masseur because vigorous manipulations stimulate the growth.

Experiments on animals revealed the importance of the diet in the development and progress of malignant tumors. A diet rich in carbohydrates stimulates the growth; calcium retards it; potassium has a stimulating effect. A diet poor in proteins is to be recommended. Cooked vegetables and cereals with abundance of fruit are the best food, especially for patients with cancers of the gastro-intestinal tract. An excessive use of coffee, spices, condiments, beans, sauerkraut, fresh bread should be forbidden. Great stress should be laid upon thorough mastication of the food.

In order to dilute and eliminate the toxic products of malignant tumors, large amounts of water should be consumed daily. Charged drinks and alcoholic beverages are not advisable. It is not difficult to restrict the diet of the patient along these lines without depriving him of culinary enjoyments. For habitual constipation, which, according to Sir Arbuthnot Lane, is an important factor in the etiology of cancer, a liberal use of water and fruits should be recommended. Occasionally a mild laxative such as liquid petrolatum may be taken. Saline laxatives such as citrate of magnesia, epsom salt, etc., must be avoided because due to their hygroscopic action they withdraw from the organism a large amount of water.

One of the greatest problems a physician has to face in the palliation of cancer is the pain. If the neurotic element plays an important rôle in the patient's complaints, bromide preparations

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and not morphia should be resorted to. A moderate pain is relieved by suppositories containing antipyrin three decigrams and extract of belladonna one centigram; adalin-luminal tablets can be used with gratifying results when the pain is very annoying. If morphia has to be used, preferably it should be given by mouth or by rectum and the hypodermic injections spared for the latest stages of the disease. Very severe pain may be relieved by a combination of morphia with magnesium sulphate. A principle should be adopted by every physician never to place a syringe in the hands of the patient. Once in a while a hypodermic injection of saline solution may be substituted for morphia with the same beneficial result.

In the cancer of oral cavity patent mouth washes should be avoided as nearly all of them contain irritating substances such as menthol, thymol, etc. An infusion of the leaves of salvia—one tablespoon to six ounces of water—alternating with a two per cent. solution of tannic acid—serves the purpose best.

In cancers of the esophagus an early gastrotomy performed under local anesthesia is very advisable as it relieves the congestion around the tumor and prevents the starvation of the patient. Milk with cream, tea, cereals, vegetables, fruit juices, thin soups, may be given through the catheter inserted into the gastrotomy opening.

In cancers of the stomach one remedy which was highly praised two decades ago and then fell into oblivion frequently acts as a tonic, relieves the distress in epigastrium and improves the appetite; it is wine of condurango—one teaspoonful three times daily before meals. Gastric hemorrhages may be checked by lavage with very hot water and application of heavy sandbags over the epigastric region. A jejunostomy may be performed in suitable cases to supply nourishment and relieve pain caused by ingestion of food.

In inoperable cases of the rectum an early colostomy is indicated. The constant irritation of the cancer masses by fecal material and the resulting congestion and pain are thus relieved and the life of the carrier prolonged over a considerable period. Low enemas with warm chamomile tea remove the necrotic masses and foul smelling secretion.

Hemorrhages from a cancerous urinary blad-

der frequently subside after irrigation with hot water and application of heavy sandbags over hypogastrum. Instillation of a few cubic centimeters of one of the blood coagulants of animal origin may prove successful. Adrenalin usually does not prove of much value in these conditions.

External cancers should not be treated with any irritating substances such as scarlet red, silver nitrate, balsam of Peru, ichthyol. Pastes containing arsenic should be used with caution as intoxications from the absorbed arsenic have been repeatedly observed.

Among the liquid caustics the chronic acid has to be mentioned because its application causes relatively little pain and checks for a while the rapid growth of cancerous masses. A two per cent. aqueous solution of formalin has in addition to these qualities also a deodorizing property.

A modern method of palliative treatment of cancer consists of application of salt paste as recommended by Andersen. An excess of sodium chloride damages and destroys the cells and also makes them more susceptible to irradiation. A formation of a thick crust is prevented by covering the dressing with some impermeable material. Pain, local edema and eventually a par-enteral salt fever are the disadvantages of this method but the published reports encourage further investigation.

In the control of fetor which frequently is one of the most unpleasant symptoms of cancer, a local application of granulated sugar often has remarkable results. The only objection to its use may be the nutritive value of carbohydrates which may contribute to the rapid growth of cancerous masses. Equally beneficial results may be obtained from the use of powdered coal of animal origin. It is superfluous to emphasize that this "kitchen treatment" (salt, sugar, coal) has merely a certain value in amelioration of the disagreeable symptoms of cancer discharge and fetor and can never be regarded as a cancer cure. Two more substances may be used in form of a dusting powder for the same purposes; permanganate of potassium and resorcin. The latter also has analgesic and slightly antiseptic properties.

Among the physical agents, phototherapy in form of sunlight may be applied as a deodorant by means of a concave mirror. Thermocautery may be used wherever destruction of necrotic

masses is desirable. Cryocautery or the use of carbon dioxide snow is superior to the application of heat as it does not create such an intensive active hyperemia.

Mineral cancer cures such as the use of lead or gold as well as employment of various sera, toxins, ferments, extracts of plants (mistletoe) are of a very problematic value.

#### CONCLUSION

It cannot be too strongly emphasized that only an early operation or radiotherapy give fair chances for a radical cure of cancer. In inoperable cases the task of prolonging the life of the patient, of relieving his pain, and of eliminating the discharge and fetor can be accomplished by means of various chemical and physical agents. Of vital importance are periodic health examinations. A widespread lay education on the cancer problem will limit the necessity of palliation and make more cases of cancer amenable to successful surgery or its substitutes.

30 N. Michigan Ave.

#### DISCUSSION

Dr. Bertha Van Hoosen, Chicago: I am very much interested in this paper because I feel it is of value to us since we see so many cases of inoperable cancer. The Doctor did not mention what seems to me one of the simplest and most harmless methods of relieving pain, stopping the odor and absolutely stopping the hemorrhage in inoperable cases. These are the three things which give the most trouble in inoperable cases. I have been using emetin hydrochloride. I have demonstrated it to my satisfaction as well as to many others. Five grams of emetin hydrochloride given intramuscularly and repeated in five days will absolutely stop the hemorrhage and will in a week's time relieve the odor and the pain will become lessened. I then repeat these intramuscular injections once every three or four weeks.

The cases which bother us most are those which have been operated on and then have a return. I have wished very much that I could be sure when I did a good radical operation on the breast for cancer that the disease was not going to return, but I have never had such results and I think no other surgeon has. I thought if emetin would do so much for these inoperable cases, I would use it to prevent the cancer returning. I have for the last seven years given emetin to all operable cases. I have given five grains intramuscularly two or three days before the operation, then five grains a week following the operation and repeat weekly for a month. I can report 13 cases of cancer of the uterus that were operated on between eight and five years ago. There has been no return in 10; three have had a return; of these three, two did not have emetin treatment. They

went to other towns where the doctor thought it was better to give x-ray treatment and they died within a year. The third patient had emetin treatment but she was delivered of a full term pregnancy a month after the amputation of both breasts and Dr. Mayo has told us that nothing saves these cases.

Dr. J. K. Narat, Chicago (closing): I did not mention emetin which Dr. Van Hoosen recommends for the reason that I did not have any practical experience. I mentioned only the methods that have been used at the Cancer Institute. I believe it is worth trying but we need large statistics to draw conclusions.

#### CORONARY THROMBOSIS\*

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Coronary thrombosis is still regarded as a rarity and not often enough considered a possibility at the bed-side in the false belief that its recognition is only possible in the dead house.

Coronary thrombosis is not at all uncommon. Christian<sup>2</sup> reports seventy cases in ten years and Nathanson<sup>17</sup> found that coronary sclerosis was a frequent cause of death. Indeed, its recognition, if not, in truth, its incidence is on the increase.

Thanks to Herrick<sup>8-9</sup> and many other American observers, its clinical picture within the last decade has been pretty well established, so that today, "cardiac infarction stands out as a clean-cut clinical entity, easy of recognition by the practising physician."<sup>2</sup>

Its proper recognition is of great importance, for cardiac infarction may dramatically mimic an acute surgical abdomen, or under the guise of an innocent "indigestion" may lead to an acute or protracted heart-failure.

Coronary thrombosis hits the mechanic as well as the professional or business man; women not quite so often. It prefers people in their late forties or early fifties, especially the arterio-sclerotic and the cardio-renal. It may attack the apparently well and young.<sup>2-17-25</sup> Syphilis,<sup>14</sup> found occasionally, plays no important role. Occurring more often in those who already have had anginose pain or heart-weakness it may be the first and often the last manifestation of grave cardiac damage.<sup>23</sup>

Sudden in onset, it is characterized by excruciating pain, constant, lasting hours, unrelent-

\*Read before the Section on Medicine Illinois State Medical Society, Champaign, May 18, 1926.



ing, not relieved by nitrites, and barely by morphia. Situated in the lower sternum, not rarely in the epigastrium, it often lacks the classical radiation of the ordinary angina and is frequently associated with gastric symptoms;<sup>16-18-18</sup> nausea, vomiting, and diarrhea. The pain may be slight; indeed, it may be absent; and the infarction is ushered in by an acute cardiac collapse<sup>18</sup> with marked weakness and fear of movement, cyanosis with a disproportionate dyspnea, and an acute congestive heart-failure.

The pulse is rapid, weak and running; usually regular, it may have the features of an auricular fibrillation, paroxysmal tachycardia or block. Hammer's case had a rate of eight per minute.<sup>7</sup>

The appearance of the patient is that of shock; it betrays suffering and apprehension; the mind is clear. The face is cold and clammy and has a highly suggestive color, "like a leaden tint spread over an earthly hue of skin." (Samson<sup>15</sup>). It may be red<sup>6-23</sup> and flushed, and rarely jaundiced.<sup>15-23</sup>

Fever appears within a day; usually not high, it may reach 104; or it may be normal or even subnormal. The pericardial rub was first described by Leyden and Kerning. Its significance was fully appreciated by Gorham<sup>4</sup>, who having found it in five out of his six cases, vested it with diagnostic dignity. The friction is very soft, disappears and reappears, and is indicative of a reactive pericarditis over a necrosed heart-muscle. Of great diagnostic value when present, it is more often absent, probably due to infarction of the deep or posterior myocardium.

A moderate leukocytosis of 14,000-22,000 is nearly always present. In one of our fatal cases the count was 40,000 with a temperature of 99.6. The fever and leukocytosis result from toxic absorption of the infarcted muscle.

The blood-pressure, previously normal or high, shows a marked drop; it may, however, be normal or even high. One of our cases had a blood-pressure of 150 twelve hours before death.

The cardiovascular apparatus may or may not show any deviations from the normal and arteriosclerosis is not always demonstrable in the peripheral vessels.

The crackles along the posterior pulmonary bases are found early and an acute suffocative

pulmonary edema may set in with the pain. The urine is diminished and contains albumin. Abdominal tenderness and board-like rigidity may occur.<sup>18-13</sup>

Most cases show changes in the electrocardiogram. Alterations in the T wave are the most constant.<sup>19-24</sup> It frequently springs directly from the downstroke of the R, develops an early high peak, quickly becoming inverted, diphasic or isoelectric. Smith demonstrated similar changes in animals by ligating the coronaries.<sup>22</sup> The Q R S complex is disturbed and its amplitude is low. Ventricular paroxysmal tachycardia occurs.<sup>20</sup>

It will bear emphasis, however, that myocardial infarction has no pathognomonic electrocardiogram and that a normal electrocardiogram does not rule out the condition. Very extensive sclerosis of the heart with obliteration of the descending coronaries were found post-mortem with negative electrocardiograms.<sup>3</sup>

Acute fatal cases of infarction show coarse granulation of the muscle-fibres with a lymphocytic and at times a marked polymorphonuclear infiltration. The older cases present a fibrous myocarditis with moderate hyperthropy and a general vascular sclerosis, most marked in the coronaries.<sup>23</sup> Reactive pericarditis is found in 25%.<sup>11-12</sup> The commonest site of thrombosis is the anterior descending branch of the left coronary with infarction of the inner wall of the left ventricle and the interventricular septum.<sup>11-12</sup> Rupture and aneurysmal dilatation of the left ventricle is not uncommon.

The prognosis while always grave is not invariably fatal. The coronary arteries have been shown by experimental ligations in animals, clinical observations with necropsies, and special roentgenologic methods to have considerable anastomoses. "Sudden death often does occur, yet at times it is postponed for hours or even days, and in some instances a complete recovery, i. e. functionally complete recovery takes place."<sup>8</sup> Herrick describes four groups;<sup>9</sup> where death is instantaneous without pain, respiratory agony, or facial distortion; fatal cases parading as severe angina; mild cases; and cases that recover with a considerable crippling of the myocardium, ending fatally after a shorter or

longer time. Thirteen out of nineteen of Wearn's cases died suddenly.<sup>23</sup>

The possibility of cardiac infarction should be borne in mind and strongly suspected when a person past middle life develops an acute slowly progressive heart-failure after a so-called "acute-indigestion"<sup>16</sup> or upon the appearance of an angina, agonizing and lasting, and not responding to nitrites. The ashen-grey face, the weak and running pulse, the low blood-pressure, and basal pulmonary crackles are highly suggestive; the fever and the leukocytosis strengthen the diagnosis. The pericardial rub and changes in the T wave, while highly diagnostic, offer additional but not indispensable information: both may be absent.

Right coronary occlusion may be surmised with a marked tachycardia (Lewis) regular or irregular, or when an enormous acute hepatic enlargement appears.<sup>16</sup>

The severity of the pain, the futility of nitrites and even morphia, its duration and frequent association with gastric symptoms, fever, and leukocytosis, and the "flutter and lability of the heart, the rapid irregular pulse, the waning heart-sounds, the dyspnea and cyanosis," readily differentiate it from the ordinary angina.

The acuteness and severity of the pain, its localization in the upper abdomen with nausea and vomiting, and the early appearance of shock suggest a surgical abdomen:<sup>18-13</sup> a perforated ulcer or an acute pancreatitis. The fever and the leukocytosis and the not infrequent abdominal tenderness with rigidity<sup>13</sup> stimulate it all the more. It may resemble a biliary colic; indeed, in the middle aged gall-bladder disease and coronary thrombosis may co-exist.<sup>12</sup>

The age of the patient with a very carefully elicited history of digestive disturbances having begun in the early twenties or thirties, and the absence of marked cardio-vascular findings help in the differentiation. On the other hand the rapid and especially the irregular pulse, the pulmonary basal moisture, the disproportionate dyspnea, and the low blood-pressure favor the diagnosis of the coronary thrombosis. The pericardial rub and an abnormal electrocardiogram, when present, are of distinct help. One of our cases admitted as an acute pancreatitis was diagnosed in the ward as an effusive pericarditis. Indeed, the severe dyspnea, the barely audible

heart-tones, and the wide cardiac dullness, suggested it very strongly. The history of previous anginal attacks, the agonizing pain, the facies of collapse, the thready pulse, and the blood-pressure of 80 soon led to the correct diagnosis.

Another patient, a woman of sixty, with a temperature of 104, a leukocytosis of 24,000, dyspnea, and rapid pulse was admitted as a pneumonia. She gave the history that two days before, in the best of health, and while at a party, she was suddenly seized with a mild discomfort in the lower chest, terrific weakness and marked dyspnea. The hurriedly summoned physician (Dr. Liederman) found her in shock, with rapid pulse, ashen-grey, cold and clammy. Examination revealed no dullness, marked pulmonary edema and a pericardial rub. I recall a similar case at the Jubileum Spital, Vienna. An old woman with a clinical diagnosis of pneumonia was demonstrated at the autopsy as an acute right coronary thrombosis by Prof. Erdheim.

Rarely coronary thrombosis may simulate a spontaneous pneumothorax or a diaphragmatic hernia.<sup>9</sup>

Relief of pain, sparing of the damaged heart, and the support of the collapsing circulation are the therapeutic essentials. Morphia in sufficient doses and at frequent intervals to secure rest of body and mind. Unnecessary examinations are best avoided. Digitalis, warmly recommended by Herrick<sup>8-9</sup> and found of distinct help by Wearn,<sup>23</sup> is used with caution by Christian.<sup>2</sup> The average case needs digitalis only when congestive heart-failure appears or threatens. Caffein is of value. Christian speaks well of camphor<sup>2</sup> in cases with a rapidly changing heart-rate and with the so distressing and sleep-robbing Cheyne-Stokes breathing. No instance of cardiac rupture followed stimulation.<sup>23</sup>

Abdominal distension should be carefully avoided by a dry diet and suitable measures. Rest in bed, complete and prolonged should be insisted upon. Only when the pulse and blood-pressure have become normal or nearly so, is it safe to get the patient out of bed, watching carefully his response to exertion. With convalescence well established, the patient should be taught to live well within the limits of his restricted myocardial capacity.



## SUMMARY

1. Coronary thrombosis is a well defined clinical entity and can be diagnosed with a considerable degree of certainty.

2. It may be ushered in as a severe and lasting angina, as an acute cardiac collapse with weakness and marked dyspnea, or as an "acute indigestion," sooner or later leading to heart-failure.

3. The ashen-grey face, the cold and clammy perspiration, the weak and rapid pulse, the basal pulmonary moisture, and low blood-pressure with the fever and leukocytosis makes the diagnosis almost certain.

4. The pericardial rub and the abnormal T wave, highly diagnostic when present, do not negative the diagnosis of coronary thrombosis by their absence.

5. The localization of the pain in the upper abdomen and the frequent association with gastric symptoms may simulate an acute surgical abdomen and require careful differentiation.

6. The prognosis, while always grave, is not invariably fatal.

7. Relief of pain, sparing of the damaged heart-muscle, and the support of the collapsing circulation are the chief therapeutic indications.

8. Coronary thrombosis requires a prolonged rest in bed and a carefully guided convalescence.

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## DISCUSSION ON PAPERS OF DRS. CARR AND TRACE

Dr. Harry Durkin, Peoria: Paroxysmal tachycardia occurs almost as frequently in normal hearts as in hearts subject to organic disease. May it not be an essential condition in the same sense that hypertension is essential? In other words, may not its occurrence in organic heart disease be incidental rather than sequential?

In normal hearts these paroxysms, provided they are not too long, are not serious. In diseased hearts they break down the remaining cardiac reserve and even precipitate death. The prognosis, therefore, is based upon the underlying disease; and a careful inventory of the heart, independently of the paroxysm, is imperative.

A second point worthy of emphasis is the relative infrequency with which this condition is recognized. The milder cases are frequently labelled as neurotics; while the more severe ones in which the attacks are superimposed upon a heart which is already damaged are labelled as "acute dilatation," or pulmonary edema. In the majority of cases so diagnosed, they are due to excess strain imposed by the inception of a normal rhythm, or by a coronary accident.

In the prevention of attacks, the removal of emotional strain, the correction of digestive disorders, and the avoidance of excess in alcohol, tobacco and coffee have long been recognized as routine procedures of value. In his experience, quinidine sulphate has been a preventive measure par excellence, abolishing attacks entirely in the milder cases and reducing the frequency and duration of the more severe cases. It is important that this drug be continued indefinitely in much the same way as luminal is used in epilepsy. Not infrequently patients have discontinued and other attacks have been precipitated and been rather severe.

In the treatment of the actual attack vagal pressure is of definite value. After finding the carotid arteries, gradually increasing pressure is made, while listening to the open, until the patient complains of pain.

Pressure on the eye-balls, to the point of moderate discomfort will sometimes stop the milder attacks. Induction of vomiting by the patient himself works in quite a few cases. An attack which lasted 36 hours stopped abruptly during a violent thunder clap. The case had resisted all measures.

Dr. White, of Boston, reported several cases with attacks of very long duration which responded to rapid digitalization after all other measures failed. Maintenance of digitalization served to decrease the frequency and duration of the attacks.

Dr. Trace has covered the essential features of coronary thrombosis. American clinicians have been almost exclusively instrumental in establishing it as a clinical entity. Even at the present time only one or two text-books give it more than passing mention. It is no exaggeration to say that it has not yet arrived on the diagnostic horizon of a large proportion of the medical profession.

In ordinary angina the blood pressure does not fail;

it shows a rise during the paroxysm; in coronary thrombosis it shows a rapid and progressive fall. In a recent case it dropped to 40 systolic and continued at 40 to 60 systolic three weeks following the attack. Only now, after two weeks of rest, has it reached 120.

Repeated blood pressure observations are perhaps the most trustworthy index of the progress of the case.

As statistics begin to accumulate one is impressed by the recoverability of a large proportion of these cases. 20 to 40 per cent.

We used to think the coronary arteries were end arteries, and when one was occluded everything was up. We now know they are not end arteries, and if a large artery is not occluded nature will establish an anastomosis and myocardial repair of the infarcted area will ensue.

The second most important point is the care with which the patients are managed after their attack. These patients should be kept in bed absolutely quiet for at least two months, depending upon the severity of the attack. Absolute quiet, both mental and physical, is imperative. In order to attain this, morphin is a drug par excellence and should be used without fear and used generously.

I have not used digitalis at all unless signs of congestive failure appear. They die anyway. I doubted whether digitalis did them any good. There is a certain amount of danger in using digitalis.

Here is a heart already greatly damaged and nature is trying to give it as much rest as possible. And the use of any cardiac stimulant is liable to precipitate ventricular fibrillation which is fatal, or rupture. The main idea is to play for time and avoid whipping the damaged or struggling heart with any cardiac stimulant and give nature a chance to repair the infarcted area.

Dr. Frederick Burcky, Chicago: I have here the heart of a patient who died eleven days ago. (Specimen Exhibited) I am passing it around. I am calling attention to the right coronary artery, under which there are two sticks. There is a small piece of paper under the aortic valve, which has on it quite a growth.

Dr. Moore was kind enough to do the post mortem for me. The specimen, at postmortem, showed very clearly the condition of this man's heart. I speak of it because it brings a case before you.

The left heart had good color; but the right heart, when Dr. Moore lifted it out of the chest, was extremely soft; about the color of milk chocolate, and very thin—you can see that. The right coronary artery about three-fourths of an inch from its origin, had a constriction, the lumen being not over a millimeter and a half in diameter. The smaller vessels were pin point at their openings. Although it had no acute coronary obstruction, it provided an excellent field for a very small thrombus which could easily come from the lesion on the valve.

The man entered the hospital February 2 where he had the first stage of a prostatectomy. March 8 he had the second stage with removal of the prostate. About five or six days following the second stage of his operation, he developed a chill with rather a marked respiratory embarrassment. There was a mur-

mur present over the entire precordium, as noted by the Internes.

He had been home a little over two weeks from April 14 and feeling perfectly well when he went down to the doctor's office. But on the way home, he became uncomfortable with a slight substernal oppression. That night he had a chill with a fever of 103. Following that until the time of his death, these chills occurred from two to eight hours apart. The average temperature shortly following would be 103.

At the time of the chill he was rather markedly cyanotic. His wife noticed his lips and face were very blue. May 8 he died of an acute dilatation of the heart. I thought that probably he had an old arteriosclerosis with thrombotic obstruction of the right coronary artery superimposed upon it. This thrombus we were unable to find anywhere in the post mortem specimen on either side.

This case illustrates the absolute necessity of keeping these patients quiet in bed. Don't let them get up even to go to the bathroom for a period of weeks or even months.

Some recent work has been done by Gold, experimentally, with digitalis in coronary obstruction. He has run a series of experiments with cats in which the coronary arteries have been tied off. He found that in his experimental work there is no more predisposition to ventricular fibrillation with the use of digitalis than there would be otherwise. That is, the digitalis index of these cats per kilogram is 102 per cent, of the normal ones. In other words, the amount of heart muscle that would be put out of commission by ligation of the coronary artery without immediately killing the cat has practically no influence on the digitalis therapy. That is experimental, and is more or less opposed to our present clinical belief in these conditions.

At Rush Medical Heart Clinic, paroxysmal tachycardia is rather rare. I have only seen about half a dozen in five years. They have occurred in younger individuals of neurotic types. The one factor most important is the psychic factor of worry or anxiety. Whenever any of these individuals had any tremendous amount of worry or anxiety, usually there was an attack precipitated.

One woman had a husband inclined to be alcoholic at times. She would come in a few days later telling of a paroxysmal attack.

I have been more or less disappointed in quinidin.

Dr. Samuel E. Munson, Springfield: It has only been in recent years that there has been mention made of coronary rupture. We had a realization of the serious damage done to the heart in these cases.

Now, the Doctor here makes the startling remark, probably startling to some of us, that even these cases of coronary rupture recover. Many of the cases of angina pectoris that men saw some years ago and recovered, they thought were not angina pectoris. In fact, the textbooks rather taught that all cases of angina pectoris were usually instantly fatal.

My point is that probably many of the cases of those men who watched their heart cases carefully, were



cases of coronary rupture and recovered even years ago without the recognition by the attending physician. The point which I wish to emphasize particularly is the possibility of the attending physician or the practitioner possibly preventing these serious things from happening in his heart cases where he has had the opportunity of having them under observation.

It was my misfortune last year to lose about four cases. In at least three of these cases we were quite positive it was coronary rupture. One of these men I had under observation for three years.

At the time he was examined he was cautioned in regard to his golf. Last year he returned from Florida, feeling better than he had at any time. His wife told me he played at one time in Florida 36 holes of golf. Within six weeks of his return from Florida, after playing on Saturday 18 holes of golf, on Sunday morning at 10:30 I saw him in this frightful condition, which the Doctor has so carefully pictured. That clammy sweat. The heart rate may not be disturbed. But with the dreadful pain only relieved by morphin, the rise of temperature, the increased leukocytosis, the involvement of the lungs at the base, and always the fine rales.

This man died in about 48 hours. It is a picture which no one will ever forget.

Dr. Nathan S. Davis, III., Chicago: I have not happened to see any case of coronary thrombosis recently. There are some cases I saw before I became acquainted with the syndrome that I think undoubtedly were that.

However, I have had three or four interesting cases of paroxysmal tachycardia. One case was associated with luetic infection and was of three days duration. He had previous attacks; the first one at least fifteen years before the one in which I saw him. Another case was in a medical student, who has attacks of paroxysmal tachycardia associated with slight migraine and with hemianopsia that lasts about as long as does the tachycardia.

A third is a case of mitral disease in which there is one of the most musical murmurs I have ever heard. He has had several attacks of paroxysmal tachycardia, ordinarily of short duration, and usually coming on after overeating or indigestion. The last attack he had was a paroxysmal auricular fibrillation rather than a tachycardia from the clinical findings at the time of the examination. That attack stopped very promptly after having him hold his breath for 60 seconds or so. He has had practically no attack since and has been using quinidin in small doses daily.

The fourth case was one of paroxysmal fibrillation in which the first attack came on while this man was in his fifties, while he was swimming in the tank, and seeing how many disks he could pick up off the floor of the tank, without coming up.

In other words, he was holding his breath for a great length of time. When he came up, he had a paroxysmal attack, lasting one hour or so. He has had one attack since then which was after overeating. Sometimes he gets premonitory symptoms that lead him to believe he is going to have an attack. He

finds that taking quinidin at those times causes almost immediate relief of these symptoms.

Dr. James G. Carr, Chicago (closing): I am very grateful for the discussion which we had because Dr. Durkin and Dr. Burcky and Dr. Davis particularly have brought out facts not stressed in the paper for lack of time.

I was interested in what Dr. Davis had to say about the way in which he distinguishes between paroxysmal auricular fibrillation and tachycardia. Personally, I believe that essentially they are one and the same. They are both precipitated by nervous factors. The fibrillation very often suggests the presence of a thyrotoxicosis.

In general I am opposed to the use of the word "essential." When we use the term essential tachycardia, we are apt to give up the attempt to discover the exciting cause. Furthermore, the use of such a term makes it easy to overlook the fact that experimentally and clinically paroxysmal tachycardia appears for the first time in many cases after serious damage to the heart. It may stop after hyperthyroidism is removed.

Paroxysms, which can only be described as essential, do occur. If we regard an attack as an essential paroxysmal tachycardia, we must be careful not to overlook the many possible organic causes of the condition.

What Dr. Burcky had to say is very interesting, especially his remarks concerning the use of digitalis after coronary obstruction. In this day and age we are being taught to digitalize patients. The use of digitalis means to many of us large doses. Subsequent to coronary obstruction, we know there is a tendency to auricular fibrillation and to ventricular tachycardia and fibrillation. Toxic doses of digitalis may cause abnormal rhythms of which one type is ventricular tachycardia. If we give digitalis to the patient with coronary obstruction, we know this with certainty, both the disease and the drug tend to the production of an increased irritability of the ventricular musculature. If decompensation is present, it may be necessary to use digitalis but I believe it should be used with caution and not used except for definite indication. The work cited by Dr. Burcky is interesting and I would be the last to discredit its clinical value. As yet, however, it is hardly allowable to carry on the treatment of patients with coronary thrombosis, whose hearts are usually the seat of widespread vascular damage of varying degree, upon a plan based on results obtained from experimental work on the cat's heart in which there is no recorded damage to the heart other than that produced experimentally.

One thing more: I wondered what Dr. Trace would have to say in regard to the presence of a normal electrocardiogram in these cases. We are not apt to have the opportunity to make an electrocardiogram at the time of the attack. The patients come to the electrocardiographic room afterwards. I would be glad to know if they get normal electrocardiograms. I have a feeling that there will be electrocardiographic attachments installed in certain rooms in the hospitals within the next few years. When such are established

in the hospitals generally, it seems to me that the surgeons in these uncertain cases will have to turn to the cardiograms for some help as to whether or not he is dealing with an abdominal or cardiac condition.

Dr. Isadore M. Trace, Chicago (Closing): Dr. Durkin re-emphasized the diagnostic importance of the rapid and, especially, variable pulse in coronary thrombosis; also the prognostic bearing that repeated blood pressure readings may have.

Now, in regard to the normal electrocardiogram in coronary thrombosis. My own electrocardiographic experiences have been very limited.

I have cited the work of Drury in the *London Heart Journal*.

About the use of digitalis in coronary thrombosis. The remarks of Dr. Carr will bear repeating. Digitalis is a very wonderful drug, but it is better to style digitalis a cardiac poison. For if we bear this in mind we will clearly realize its value and also its dangers.

Digitalis, even in the normal heart, is likely to produce various disturbances. Auricular fibrillation may be induced.

The deductions that one could make from the work on cats, I think ought to be drawn very carefully, for, after all, their coronaries have been ligated but their heart muscle, to begin with, was a sound muscle.

Personally I rather fear the use of digitalis, especially in large doses, in coronary thrombosis. We have been giving it when confronted with a vital indication; when there are signs of failure, and these cases usually make a fatal exit.

## CASE OF CRETINISM AND MYXEDEMA\*

GERARD N. KROST, M. D.  
CHICAGO

Case 1. L. S., aged 10 years, entered Wesley Memorial Hospital, Nov. 25, 1916, at the age of 4 weeks. Weight 7 lbs.

Complaint: Inability to nurse, rapid loss of weight, six lbs. loss from birth. Unable to nurse from birth, inability apparently caused by the thickened protruding tongue.

Birth History: Very cyanotic baby at birth. Resuscitation difficult. Birth weight 13 lbs., labor difficult. First baby, first pregnancy.

Family History: Father and mother living and well and in good health. Mother has a rather large goiter.

Examination: Baby apathetic, hard to rouse. Hair, coarse and abundant. A wrinkled hairy forehead, ears large, eyes normal, low, flat saddle-shaped nose, lips thick, tongue protruding, thickened and its mucous membrane loose and fissured. Chest: Heart-normal tones. Lungs normal. Abdomen large, pendulous, with large

umbilical hernia. Extremities, fingers and toes short and stubby, skin relaxed and in folds, dry to touch and with a doughy coarse feeling.

Diagnosis—Cretinism.

Treatment and Course: The baby was placed on  $\frac{1}{4}$  grain desiccated thyroid per day. Feeding was given by tube, as all attempts to feed by bottle or dropper were unsuccessful. All feedings were by stomach tube until the 24th day after entrance, when about half of the feedings in the 24 hours were taken from the bottle. By the 32d day all feedings were taken from the bottle.

The temperature, which was 96 on entrance, remained below 98.6 rectally until the 18th day when it reached 99.2. It remained normal until discharge. The baby was discharged on the 71st day with little improvement in weight, having only gained 3 ounces in that length of time. It, however, was alert; the tongue, while still thickened and protruding, was very much smaller. The skin had lost considerable of its dry, doughy feeling. Its progress from a weight standpoint from then on was very good and at a year the baby was well nourished.

The normal development in physical strength and mentality have been much retarded. She sat alone at one year, walked alone at 3 years. Simple words were first spoken indistinctly at 3 years. Teething was about normal. The tooth structure was poor, early decay took place. She was able to dress a doll at 4 years. She jumped with both feet at 8 years; climbing was done with the knees until recently. She now uses her feet in climbing. At present the child is quite awkward, particularly going up stairways and inclines. Her legs are weak in comparison to the arms and she falls easily. The hand grip is very strong. When rising from the floor she rises by pushing with the hands until the legs are almost completely extended. She now laces her own shoes, and partly dresses herself but very slowly. She has done this for two years. She has washed dishes for a year, dusts furniture, sews on doll clothes. She plays good-naturedly with other children unless crossed too much, then shows considerable rage. She is attending school and is in the second grade. Her writing is large and irregular. She knows part of the multiplication table of 2. She reads and writes a little.

She is receiving one grain of desiccated thyroid

\*Presented before Chicago Medical Society, November 10, 1926.



three times daily. The original  $\frac{1}{4}$  grain dose three times daily was increased to 1 grain three times daily by one year and has been held there constantly since. This is an unusually large dose for the early years, 1 grain in 24 hours being the customary dose at 2 years. The mother notices that if there is a lapse in thyroid medication the eyes cross and the tongue protrudes more. The basal metabolism taken Nov. 7, 1926, was minus 3.8%, showing about normal metabolism and indicating that the correct amount of thyroid is being given. Untreated cretins have a basal metabolism rate of minus 40.

Her symptoms now of cretinism, while not marked, still are characteristic. The skin is mottled, cold, cyanotic, coarse in texture. She constantly complains of being cold with the heaviest amount of clothing. The body is short and squat. The abdomen is still too large. The lordosis is not marked but still present. The face is broad, eyes wide apart, the root of the nose is low, mouth is held open, the neck is short, the teeth are of very poor quality, the hair is coarse and dry, the pelvis is narrow, the legs are short, the hands are short and thick, walking is in a swaying, unsteady manner, and the head is held slightly forward. Her height is 46 $\frac{1}{4}$  inches, 5 inches below average height of a 10-year-old girl. Her weight is correct for length, 53 lbs. Roentgenogram of the wrists show 7 of the carpal bones ossified, the 8th does not appear normally until 11 years. Her bones, therefore, do not show a delay of ossification. The radial and ulnar epiphyses are not fully developed as normal. In untreated cretinism osteogenesis is retarded, the bones are of normal shape, but of reduced size. The epiphyseal centers develop late or are entirely absent. This is particularly easy to demonstrate at the wrist.

The diagnosis of cretinism in this case according to most authorities is incorrect and should be congenital myxedema. A classification used by Dr. Chas. P. Emerson in Abt's System of Pediatrics is the following: 1, congenital myxedema—symptoms present at birth; 2, early infantile myxedema—manifestations beginning in the 1st year; 3, late infantile myxedema—onset between 2d and 3rd year; 4, incomplete forms of atrophic myxedema—corresponding to the myxedema of adults. In the first and second

group a total absence of thyroid from degeneration or a congenital absence from a failure in embryonic development is present. The delay in symptoms in the second group being explained on the basis that the baby receives thyroid secretion through the mother's milk, which grows insufficient in quantity as the degeneration of the thyroid continues. In the third and fourth group a degeneration takes place after birth. True cretinism Emerson narrows down to the group developing endemically in certain localities in Switzerland, Austria and Italy, in which a condition of dwarfism due to retarded development is associated with a greater or lesser degree of mental defectiveness and changes in the thyroid gland, bones, skin, genitalia and organs of special sense, this condition being associated with endemic goiter.

Congenital myxedema must be differentiated from cretinism, dwarfism and Mongolian idiocy. To diagnose cretinism from congenital myxedema is almost impossible as those most competent to know are in disagreement as to whether they are one and the same condition. The one occurs sporadically, the other endemically. The clinical manifestations are the same. In the cretins of endemic type 63% develop a marked goiter, so the presence of goiter would differentiate. In true dwarfism changes in the skin, such as absence of sweating and thickening would not be present. Roentgen-ray plates of the bones would not differentiate as in both there would be a retardation of osteogenesis. The dwarfs are of normal mentality or slight impaired mentality. The achondro-plastic dwarf has short extremities and almost normal trunk, with only a slight mental impairment. Skin changes are absent. Roentgen-ray plates would show changes only in the bones of the lower extremities. Mongolian idiocy might occasionally confuse, particularly as Mongols may have considerable thyroid deficiency. In Mongolian idiocy the hair is usually fine, the skin soft and moist, the eyes are characteristic, narrow lid apertures, epicanthus (the cycle shaped vertical fold of skin over the inner canthus) slanting eyes, inner canthus lower than the outer. The head is very flat. Double jointedness is present. The curved shortened fifth finger is quite characteristic. The Mongol is usually very restless and takes an active interest in what

is going on around him, while the cretin is apathetic.

The unusual features of this case are the early severe symptoms and rather good results accomplished by early and continuous treatment. We have under our observation in the clinic another cretin who was not treated so early and the development, both physical and mental, is far less than in this child.

Case 2. Shown through the courtesy of Dr. A. A. Goldsmith:

E. C. Occupation iron moulder, aged 53 years. Seen first Jan. 9, 1926. History of six months' duration, soreness over epigastrium without reference to food intake. Constant desire for something to eat. Constipated; 32 lbs. loss of weight in 6 months. Examination: pulse 120, tremor of fingers, Von Graefe sign present. Thyroid not enlarged. Jan. 23, 1926, basal metabolism +53. Operation advised and refused. Roentgen-ray treatments started Jan. 26, 1926. Patient had a total of 22 radiation treatments, totalling 120 minutes radiation time, divided into 3 series of 40 minutes each. These three series of 40 minutes each were divided up over four areas, each receiving 10 minutes during the series or a total of 30 minutes each during the entire treatment. Areas treated were one each over right and left lobes, also one over region of thymus with one area through the posterior surface of the neck. The entire treatment was spread over a period of 3 months and 8 days, or from Jan. 26, 1926, to May 8, 1926. Basal metabolism rate showed plus 53 at the beginning of treatment. Treatment discontinued when basal metabolism rate showed plus 22. Basal metabolism test one month and ten days after stopping treatment showed plus 6. July 10 basal metabolism rate -19. Skin is coarse and white, voice is cracked, he is clumsy and, according to his own observation, his mentality is sluggish. Oct. 23, 1926, basal metabolism rate -13.

This is a case of myxedema brought on by either a degeneration in thyroid tissue, or in thyroid secretion from exposure to the roentgen ray. This resulting damage is probably not permanent and will probably disappear under thyroid medication. He is receiving one gram of disiccated thyroid a day, larger doses not being tolerated. Larger doses cause headache and a sensation of fullness in the head.

## Book Reviews

MEDICAL CLINICS OF NORTH AMERICA. New York number. Vol. X, No. 4. January, 1927. Philadelphia & London. W. B. Saunders Company.

The contributors to this number are Doctors Bullowa, Diamond, Donaldson, Eppstein, Goodman, Graves, Held, Hoyt, King, Klemperer, Kraetzer, Marcus, Miller, Mosenthal, Myerson, Ornstein, Perkins, Strauss, Wechsler. All from the medical and surgical staff of the Lenox Hill Hospital, New York, Symposium.

TEXT BOOK OF BIOLOGICAL CHEMISTRY. By James B. Summer, Ph.D., New York. The Macmillan Company. 1927. Price, \$3.50.

This book is means first and last for the elementary student. The author's aim has been to set before students as briefly and simply as possible the principal facts and theories of biological chemistry.

A MANUAL IN PRELIMINARY DIETETICS. By Maud A. Perry, B.Sc., St. Louis. The C. V. Mosby Company. 1926. Price, \$1.25.

This work is intended for nurses instruction in preliminary dietetics. The work follows the plan of combining the theory, demonstration and the practical laboratory work.

HOSPITAL HOUSEKEEPING AND SANITATION. By Nora P. Hurst, R. N., St. Louis. The C. V. Mosby Company. 1926. Price, \$1.25.

This work is intended to supply a long felt need by instructors in hospital training schools. The work is presented from the teaching standpoint. All practical demonstrations are outlined in detail.

## Society Proceedings

### ADAMS COUNTY MEDICAL SOCIETY

The annual social meeting of the society, January 11, 1927, was held under the auspices of the Woman's Auxiliary. The members assembled at the Elks' Club where a splendid dinner was served at 8:15 P. M. to 53 persons. After the dinner Mrs. Harold Swanberg, President of the Woman's Auxiliary, introduced the entertainers. Dr. and Mrs. Frank Cohen gave a duet-solo on the piano, which was enjoyed by everyone. Mrs. H. S. Maupin rendered several solos, being accompanied on the piano by Mrs. Frank Cohen. The singing was very much appreciated by all. Following this several of the members were called upon for a few remarks. Dr. C. D. Center, in response to his toast asked whether the members wished a song or a speech. The expression of the members was for a song and Dr. Center responded in a manner that surprised many of our members. Following the musical numbers and speakers a bridge party was arranged and seven tables were filled. The favors for the men were won by Drs. Blomer, Harris and Jurgens and by the ladies, Mesdames Caddick, Steiner and Milton Bitter. During the dinner and throughout the entire evening, music was furnished by the Malambri



Orchestra. An opportunity was also provided for some of the members to enjoy amusement at cards other than bridge. Mrs. C. D. Center, as Chairman of the Entertainment Committee of the Woman's Auxiliary, arranged the program in co-operation with Dr. Grant Irwin, Chairman of the Entertainment Committee of the Medical Society. The entire affair was a success and did much to encourage good social feeling that should exist between the members of the profession and their families. Adjournment was made about 1130 P. M.

HAROLD SWANLEY, M. D., Secretary.

### ALEXANDER COUNTY

At the December meeting of the Alexander County Medical Society the following officers were elected: President, Dr. J. K. Rossen, Tamms; vice-president, Dr. Jas. M. Gassaway, Cairo; secretary and treasurer, Dr. B. S. Hutcheson, Cairo; delegate, Dr. W. F. Grinstead, Cairo; alternate, Dr. Jas. S. Johnson, Cairo.

I am acting as secretary for Dr. B. S. Hutcheson who is confined to St. Marys Hospital with a fractured hip which he sustained about seven weeks ago when he was struck by an auto.

Yours very truly,

JAS. S. JOHNSON.

### COOK COUNTY

*Regular Meeting, January 5, 1927*

Sarcoma. Illustrated with Lantern Slides.....  
.....Joseph C. Bloodgood, Baltimore, Md.  
Discussion—Irwin R. Schmidt, University of Wisconsin; James P. Simonds, D. J. Davis, J. J. Moore  
*Joint Meeting Chicago Medical Society and the Chicago Roentgen Society, January 12*

1. Radiography an Indispensable Aid in the Diagnosis of Chest Conditions.....  
.....L. R. Sante, St. Louis, Mo.  
Discussion.....Hollis E. Potter
2. The Practical Application of X-Ray Therapy in the Treatment of Skin Malignancies. (Motion picture, a part of the presentation).....  
.....J. M. Martin, Dallas, Texas  
Discussion.....Wm. Allen Pusey

*Michael Reese Hospital Program*

*Arranged by "Baer Fund Committee," Jan. 19*

1. "Group Study and Clinical Clerkships at the Michael Reese Hospital" (Committee on Clinical Teaching) (5 minutes).....W. W. Hamburger
2. "Iodine in the Preoperative Surgical Treatment of Goiter" (From the Thyroid Group)—(15 minutes).....D. C. Strauss
3. "Premature Infants: A Report of 160 Consecutive Cases Cared for at the Special Station at Sarah Morris Hospital" (From the Clinic for Premature Infants) (15 minutes).....J. H. Hess
4. "Roentgenologic Diagnosis" (From the Radiologic Laboratory) (15 minutes).....R. A. Arens
5. "Medical and Surgical Considerations of Jejunal Ulcers" (From Gastro-Intestinal Group).....  
(20 minutes) .....L. Bloch, A. A. Strauss

*Joint Meeting of the Chicago Medical and Dental Societies, Jan. 26, 1927*

1. "Clara Cleans Her Teeth" (motion picture)....  
.....By Thomas B. McCrum, Kansas City, Mo.  
(This is the first showing of Dr. McCrum's new film which has just been completed under his direction in Hollywood.)
2. "The Community's Responsibility for Health Education." By Hugh S. Cumming, Surgeon General, United States Public Health Service, Washington, D. C.
3. "Some of the Diseases of the Soft Tissues of the Mouth, Differentiating Between Those of Primary and Those of Secondary Origin".....  
.....By Thomas L. Gilmer  
Discussed by.....William Allen Pusey, (M. D.)

### ST. CLAIR COUNTY

The following programs have been announced:

January 7, Dr. Jos. C. Bloodgood, Baltimore, Md. "Cancer Control."

February 3, Dr. Mather Pfeifferberger, Alton, Ill. "Diseases of Gall Bladder."

March 3, Dr. H. Milton Conner, of Mayo Clinic. "Condition Associated with Splenomegaly."

April meeting not definitely settled.

May 5, Dr. Wm. O. Krohn, Chicago, Ill. "Psychiatry in Relation to Crime and Disease."

June 2, Dr. Vilray P. Blair, St. Louis, Mo. "Plastic Surgery from the Patient's Viewpoint."

The Fall meetings are not yet arranged.

Approximately 1,000 of the laity attended the Bloodgood lecture in the East St. Louis High School, January 7.

The St. Clair County Society has a splendid attendance percentage record. A good crowd is usually present for each meeting.

I. L. FOULON, Secretary.

### WARREN COUNTY

The Warren County Medical Society held one of its biggest meetings in its history on Tuesday, January 4, 1927. The meeting was held at the Monmouth Elks Club, beginning at 4:00 P. M. with a talk on cancer by Gilbert Fitz-Patrick, M. D., Chairman of the Executive Committee for Illinois, of the American Society for the Control of Cancer.

Dr. Fitz-Patrick talked on the organization, its history, purpose, and illustrated his talk with motion pictures on the subject of Cancer.

At the same hour, Dr. Joseph Colt Bloodgood of Johns Hopkins University Medical School, Baltimore, talked at the high school auditorium to more than four hundred members of the Federation of Women's Clubs, and members of other organizations, including the teachers' association of Warren County, the subject of the address being "What every woman should know about Cancer."

A banquet was served at 6:30 P. M. at the Elks Club to nearly two hundred physicians and dentists of Western Illinois and Eastern Iowa. A short after dinner program was given, Professor Frank W. Phil-

lips, superintendent of Schools acting as toastmaster. The address of welcome was given by John Lugg, mayor of Monmouth. Mr. Lugg has more than the usual interest in the work of the medical profession, and this was shown in his address. The welcome from the Warren County Medical Society was given by Dr. Frank C. Winters of Monmouth. Other talks were given by Drs. Mather Pfeifferberger of Alton, President of the Illinois State Medical Society, G. Henry Mundt, Chicago, President-Elect, and William D. Chapman, Silvis, Chairman of the Council.

At 7:30 the principal address of the evening was given by Dr. Joseph C. Bloodgood on his favorite subject, "Cancer." In his usual characteristic and forcible manner, Dr. Bloodgood told the results of his many years of investigations on the subject, impressing on all his listeners that we do know much more about cancer today than the profession knew twenty-five years ago.

Many illustrations were shown on the screen to emphasize many of the points made in the talk. Dr. Bloodgood stated that his records show that hopeless cancer of the breast has been reduced from 55 per cent. to less than 10 per cent, and the actual cures have increased from less than 10 per cent. to more than 60 per cent. He attributes these improvements to the fact that people have been given correct information concerning cancer. With an increase in our educational efforts there should be a diminution in the mortality from this disease.

Dr. Bloodgood is a hearty advocate of the periodic health examination or the annual health inventory, and believes it one of the best things to aid in the check of cancer.

He emphasized the necessity of frequent dental examinations, the proper selection of diet and other things of considerable importance in the consideration of the subject.

This meeting was the first of a series of meetings held in Illinois at which Dr. Bloodgood appeared on the program, and it was arranged by the American Society for the Control of Cancer, through the Illinois branch, of which Dr. Gilbert Fitz-Patrick is Chairman.

There were nearly two hundred physicians and dentists present, many of whom traveled as far as two hundred miles to hear Dr. Bloodgood. About fifty of this number came from Iowa and all were unanimous in their opinion that it was one of the best county society meetings they have ever attended.

CHARLES P. BLAIR, M. D., Secretary.

#### WHITESIDE COUNTY

The Whiteside County Medical Society held its regular business meeting at Morrison, Ill., December 30, 1926, at which time the following officers for 1927 were elected: President, Chas. H. Parker, Sterling; vice-president, A. H. Foster, Erie; secretary-treasurer, L. S. Reavley, Sterling; delegate, L. S. Reavley, Sterling; chairman legislative committee, H. L. Petit, Morrison.

The society voted to co-operate with the American Society for the Control of Cancer in education of the public.

L. S. REAVLEY, M. D., Secretary.

#### Marriages

WALTER W. ARMSTRONG, Chicago, to Miss Kathleen Musson of Kansas City, Mo., January 1.

MARY LEOLA CARRICO, Danville, Ill., to Mr. C. J. A. Dalziel of Winnipeg, Man., December 11, 1926.

THOMAS FRANKLIN DORNBLASER, Amboy, Ill., to Mrs. Maude Rider Brown of Fort Wayne, Ind., October 16, 1926.

SAMUEL L. KELLER, Waukegan, Ill., to Miss Edith Dahlstrom of Chicago, December 22, 1926.

CLYDE D. PENCE, to Miss Olive K. Weldon, both of Chicago, December 24, 1926.

#### Personals

Dr. Robert W. Edwards has been appointed health officer of La Grange, succeeding Dr. Jesse W. Carr, resigned.

Dr. Robert L. Whiteside has been appointed health officer of Zeigler to succeed the late Dr. Isaac A. Foster.

Dr. James Burns Amberson, Jr., addressed the Chicago Tuberculosis Society, January 13, at the Brevoort Hotel, on "Correlation of Clinical Roentgenographic Data in Pulmonary Tuberculosis."

Maud Slye, Ph.D., of the Otho S. A. Sprague Memorial Institute, addressed the Institute of Medicine of Chicago, January 28, on "Studies in the Nature and Inheritability of Cancer."

Dr. Albert M. Earel, Hoopeston, has been elected president of the C. & E. I. Railway Surgeons' Association. There are said to be ninety-nine surgeons in the service at the railway, sixty of whom were present at the annual meeting in Chicago, December, 1926.

Roger Adams, Ph.D., head of the department of chemistry, University of Illinois, has been awarded the Nichols Medal in Chemistry of the New York Section of the American Chemical Society for work on "The Acids of Chaulmoogra Oil in the Treatment of Leprosy."

Dr. Robert Z. Sanders was elected president of the staff of the Decatur and Macon County Hospital, Decatur, for the ensuing year, and Dr.



Charles C. Chapin, secretary. About fifty were present at the banquet and the election at the hospital, December 14, 1926.

Dr. John E. Gordon, assistant medical superintendent of the municipal contagious disease hospital, has accepted a position as medical director of the Herman Kiefer Hospital for Contagious Diseases, Detroit, Mich. Dr. Gordon has been with the municipal contagious disease hospital in Chicago about two years.

Dr. Alton S. Pope, assistant professor of epidemiology, DeLamar Institute of Public Health, Columbia University, New York, resigned to accept the position of chief of the bureau of communicable diseases of the Chicago Department of Health, held for many years by the late Dr. Herman Spalding.

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### News Notes

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—St. Elizabeth's and St. Vincent's Hospitals at Belleville have merged.

—The Garfield Park Hospital is building an eight story addition which will cost \$650,000; it will be ready for occupation by May 1.

—The Chicago Neurological Society and the Chicago Orthopedic Club held a joint meeting at the Drake Hotel, January 20.

—The new 225 bed addition to the municipal tuberculosis sanatorium will be ready for occupancy about August 1; this will increase the capacity of the hospital to 1,200 patients. The sanatorium occupies a site of 160 acres at Crawford and Bryn Mawr avenues.

—The Institute of Medicine of Chicago, at its annual meeting, December 17, 1926, elected Dr. William Allen Pusey, president; Dr. Louis E. Schmidt, vice-president; Dr. George H. Coleman, secretary; Dr. John Favil, treasurer, and Dr. Ludvig Hektoen, chairman of the board of governors.

—The city council of Rock Island has accepted the bid of the county supervisors for the sanatorium property at Twenty-Fifth Avenue and Seventeenth Street, consisting of five acres of land, building and equipment. At a special election in September, 1926, the citizens of Rock Island voted to sell the property.

—The Chicago Surgical Society met January 7 at the Presbyterian Hospital for a clinical ses-

sion. Among others, Dr. Jerome R. Head spoke on "Use of Lipoidol in Thoracic Surgery," and Drs. Allen B. Kanavel and Sumner L. S. Koch on "Dupuytren's Contracture, with a Report of Eighteen Cases."

—The Wieboldt Foundation distributed \$67,000 December 24, 1926, to more than a hundred philanthropic agencies in Chicago, the largest donations being \$10,000 to the United Charities; \$4,000 to the Infant Welfare Society; \$3,500 to the Visiting Nurses' Association; \$3,000 to the Illinois Children's Home and Aid Society, and \$1,500 to the Boy Scouts.

—The University of Chicago has named the clinic of internal medicine at its new medical schools on the Midway in honor of Dr. Frank Billings. Dr. Billings, who has retired from the active practice of medicine, is professor emeritus of medicine at the university, and for many years was professor of medicine and dean of the faculty at Rush Medical College. The Billings Medical Clinic will occupy the northwest section of the new medical quadrangle, which is nearing completion.

—Dr. Peter S. Winner, for eight years superintendent of the medical service at the Chicago Municipal Tuberculosis Sanitarium, has resigned to engage in private practice. The board of trustees has requested a committee, comprising Drs. Frank Billings, James B. Herrick, Ludvig Hektoen and Robert B. Preble, to pass on applicants for the position and to recommend a candidate. Details concerning applications for the position can be had by calling the central office of the sanatorium, 2049 Washington Boulevard, telephone Seeley 4110.

—The Pike County Medical Society, at a meeting in Barry, voted to erect a memorial tablet in the courthouse park at Pittsfield to commemorate the memory of the late Dr. John T. Hodgen and Dr. Henry Mudd, both of whom started their medical careers in that city. Dr. Hodgen, who later became a professor in the Missouri Medical College, St. Louis, was the inventor of the well known Hodgen's splint. Dr. Mudd also later became a well known surgeon, and was a teacher in the Missouri Medical College.

—Dr. Isaac D. Rawlings, state health officer, notes that measles and pneumonia are unusually

prevalent at this time, the rates being about the ordinary rates for late February and March, when these diseases are at peak prevalence; 1,200 cases of measles were reported last week and 445 cases of pneumonia. Pneumonia was the cause of death of 12,305 children under 3 years of age during the last six years in Illinois. The mortality for pneumonia among children was highest during the years when measles was widespread.

—Officials of the Illinois State Medical Society held a luncheon at the Morrison Hotel, Chicago, January 4, to award a prize of \$500 to that woman's club of the state which, during 1926, did the most significant work in promoting the examination of pre-school children. As president of the Woman's Club of Metropolis, Mrs. George H. Mosely was awarded the prize, which was the gift of a physician. Metropolis is on the Ohio River in the southeastern part of Illinois. Among the other children benefited by this campaign were many who spend much of their lives on house boats.

—The northside branch of the Chicago Medical Society will hold a memorial meeting in commemoration of the late Dr. Albert J. Ochsner at the John B. Murphy Memorial Building, 48 East Erie Street, February 3, 8 o'clock. Dr. Walter W. Chipman, Montreal, Canada, will speak on "A Personal Appreciation of Ochsner"; Dr. William J. Mayo, Rochester, Minn., on "Ochsner's Work," and Dr. Allen B. Kanavel, Chicago, on "Surgical Progress." This is the first lecture of the Ochsner Memorial lectures established by the northside branch. All members of the Chicago Medical Society and their friends are cordially invited.

—The Chicago Lying-In Hospital, 426 East Fifty-first Street, of which Dr. Joseph B. DeLee has been chief of staff since its establishment in 1899, has become affiliated with the University of Chicago, it was announced, January 11. It is proposed to erect a new \$1,000,000 hospital building at the university west of the New Albert Merritt Billings Hospital, and to sell the present hospital and use the proceeds for an endowment fund. The new hospital will provide 180 beds, a \$100,000 laboratory is to be built by the university and an isolation pavilion, and its staff will be members of the department of

obstetrics and gynecology of the university. A campaign to raise \$1,000,000 for the new building will be undertaken by the board of directors, the president of which for the last eighteen years has been Mrs. Kellogg Fairbank. Mrs. Fairbank is reported to have said that the affiliation means a continuation of the "superb work done by the hospital during the last thirty years, and a guarantee that the present high standards of its medical directors will be continued indefinitely."

—At the January meeting of the Winnebago County Medical Society the following men were elected to serve for the ensuing year: president, Dr. A. W. Christenson; vice-president, Dr. W. L. Crawford; secretary and treasurer, Dr. K. G. Woodward; censor, Dr. Warren Ives; delegates, Dr. J. Tuite and Dr. E. H. Weld; alternate delegates, Dr. J. R. Porter and Dr. A. W. Christenson; medico-legal adviser, Dr. D. Lichty.

—Dr. Ralph H. Kuhns, Chicago, spoke at a meeting of the Illinois Children's Home and Aid Society, Chicago, January 3, on the subject of "The Importance of the Prevention of Malnutrition in Children."

—At a regular meeting of the Elgin Physicians' Club, January 10, 1927, Dr. Jesse R. Gerstley of the staff of Northwestern Medical School, spoke on "Preventive Medicine in Private Practice," as applied in early childhood. He emphasized the importance of tests for susceptibility to diphtheria and scarlet fever; the use of toxin-antitoxin as a successful prophylaxis in scarlet fever in proper dosage; the questionable value of pertussis vaccine. He announced the early appearance of a reliable strepto-coccic serum for measles prophylaxis following the discovery of the causative germ.

Dr. Gerstley's talk was very interesting, and appreciated by the Club.

—At the annual meeting of the Chicago Ophthalmological Society the following officers were elected for the ensuing year: Dr. Robert H. Buck, president; Dr. Oscar Cleff, vice-president; Dr. Charles G. Darling, secretary-treasurer; Dr. Clarence Loeb, corresponding secretary; Dr. Frederick Vreeland, councilor.

Dr. William Holland Wilmer addressed the Society on the establishment and aims of the new William Holland Wilmer Institute of Ophthalmology at Johns Hopkins Hospital, Balti-



more. He was elected an honorary member of the Chicago Ophthalmological Society.

—The Peoria Municipal Tuberculosis Sanatorium announces the opening of their new addition for occupancy. The total capacity of this institution is now eighty beds, which includes facilities for the separate care of colored patients. Patients from outside counties are also admitted.

—Dr. William Edward Fitch, formerly editor of *Gaillard's Southern Medicine*, Savannah, Ga., and of *Pediatrics* of New York City, author of Fitch's Dieto-therapy and of "Mineral Waters of the U. S. and American Spas" just off the press, and for many years specializing in New York City in Diseases of Metabolism and Medical Hydrology, has recently associated himself with the well known Buffalo Lithia Springs of Virginia, being an officer of the corporation and its Medical Director. The Buffalo Lithia Springs will be developed into a great American Spa—new modern metropolitan hotel, sanatorium and bathing establishment.

—Erratum: In the report of the Greene County Society meeting published in January Journal it was stated that Dr. J. S. Billings was elected vice-president. This was an error. Dr. N. J. Bucklin of Roodhouse was elected vice-president. In this connection it is suggested that the secretaries in reporting meetings for the Journal omit such details as who nominated and seconded candidates for office and other details that may be necessary or desirable as secretaries' records. Much unnecessary energy is spent on long lists of names of persons attending the meetings when the number is quite sufficient. The list of officers (presidents and secretaries), is corrected whenever information of changes comes to hand. This information should be forwarded promptly for publication. The Journal solicits news items, grams, resolutions, elections of officers, etc. especially reports of meetings, including pro-

surgery and clinical surgery, Northwestern University Medical School since 1883; secretary of the Section on Surgery and Anatomy, 1903-1904, and chairman, 1915-1916, of the Section on Surgery, General and abdominal, of the American Medical Association; member of the American Surgical Association; past president of the Chicago Surgical Association, and the Western Surgical Association; at one time member of the National Board of Medical Examiners; formerly on the staffs of the Michael Reese, Mercy, Cook County, Wesley and St. Luke's hospitals; aged 70; died, January 21, of coronary sclerosis.

JOHN PERCY BENNETT, Glen Ellyn, Ill.; Bennett Medical College, Chicago, 1897; aged 56; died, November 22, 1926, at the Midwest Hospital, Chicago, of diabetes.

ANTON THEODORE HARRIS HOLMBOE, Chicago; University of Illinois College of Medicine, Chicago, 1886; formerly professor of orthopedic surgery, Bennett Medical College, Chicago; on the staff of the Norwegian-American Hospital; aged 69; died, January 3, of arteriosclerosis.

FREDERICK CHARLES HOLZMAN, Chicago; Bennett Medical College, Chicago, 1912; on the staff of the Chicago General Hospital, where he died, December 9, 1926, of cervical cellulitis, aged 38.

EDWIN GARVEY KIRK, Chicago; Rush Medical College, Chicago, 1909; a Fellow, A. M. A.; formerly professor of pathology and bacteriology, Bennett Medical College, Chicago, and Loyola University School of Medicine, Chicago; aged 48; died, January 1, of chronic nephritis.

SMITH D. LOW, Pekin, Ill.; Eclectic Medical Institute, Cincinnati, 1882; Homeopathic Medical College of the State of New York, 1884; aged 66; died at Dallas, Texas, Dec. 11, 1926, of pneumonia.

LUCIUS MCALISTER, Polo, Ill.; Hahnemann Medical College and Hospital, Chicago, 1880; aged 67; died, November 20, 1926, of carcinoma of the spleen.

JAMES J. MORGAN, Chicago; Chicago Medical College, 1888; aged 63; died, October 31, 1926, of acute dilatation of the heart.

CLAUDE FRANK SHRONTZ, Moline, Ill.; Northwestern University Medical School, Chicago, 1896; a Fellow, A. M. A.; formerly on the staff of the Kankakee (Ill.) State Hospital; aged 57; died, December 27, 1926, at St. Mary's Hospital, Kankakee, of diphtheria.

WILLIAM JOHN UPPENDAH, Decatur, Ill.; Rush Medical College, Chicago, 1901; served during the World War; aged 48; died, December 29, 1926, at the Presbyterian Hospital, Chicago, of carcinoma of the stomach.

JOHN R. WALLACE, Evanston, Ill.; Bennett Medical College, Chicago, 1890; member of the Illinois State Medical Society; aged 65; died, December 16, 1926, of an injury received in a fall.

EDWIN YOUNKIN, Chicago; Eclectic Medical Institute, Cincinnati, 1866; aged 88; died, November 12, 1926, of gastric ulcer.

## Deaths

EDMUND JOSEPH ABELL, Joliet, Ill.; Hahnemann Medical College and Hospital, Chicago, 1881; member of the Illinois State Medical Society; aged 69; died, December 22, 1926.

EDWARD WYLLYS ANDREWS, Chicago; Chicago Medical College, 1881; a Fellow A. M. A.; professor of



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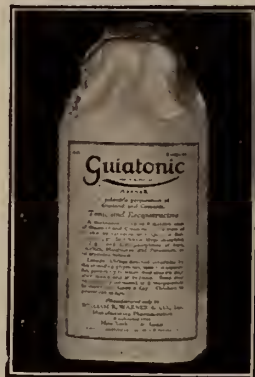
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# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF  
THE ILLINOIS STATE MEDICAL SOCIETY

VOL. LI

OAK PARK, ILL., MARCH, 1927

No. 3

## ILLINOIS MEDICAL JOURNAL

Published monthly by the Illinois State Medical Society under the direction of the Publication Committee of the Council.

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Membership correspondence to Dr. Harold M. Camp, Monmouth, Ill.

Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 1618 Juneway Terrace, Chicago.

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## Editorial

### THE ANNUAL MEETING IN MOLINE

The seventy-seventh annual meeting to be held in Moline May 31, June 1 and 2, 1927, will be the best meeting that the Society has ever had. This annual meeting is members' meeting. This is the one time in the year when the members from all parts of Illinois should get together for three days to have a genuine reunion.

Each County Society is entitled to one or more delegates. The by-laws state that each Society is entitled to one delegate regardless of the number of members in the Society. The larger Societies may have one delegate for every seventy-five members, and one for each major fraction thereof. Upon this basis it can be seen readily that a Society with 113 members is entitled to two delegates.

Each County Society should elect delegates who will attend the meeting, for the House of Delegates is the real legislative body of the State Society and the position of delegate is important.

To be a success, the annual meeting requires several elements. First, a well arranged and attractive program. Second, the proper type of cooperation on the part of the host Society. Third, and by no means of last importance, the proper cooperative spirit on the part of the membership. This last named requisite can be shown by a large attendance at the meeting. Also this encourages and endorses the efforts of those who have worked hard to make the meeting a success.

The Committee on Arrangements, the Council, Officers of the Society and Officers of the Five Sections have all been busied for months on the program and the plans for the Moline Session. Men of national prominence will give papers in each section. The orators in medicine and surgery, and the principal speaker at the opening session to which the public is invited,



have been selected thoughtfully and each will have a message of interest to all members.

The Rock Island County Medical Society, the Host Society, has chosen a committee on arrangements which has been laboring for months to make the members feel welcome in Moline and the meeting an unusual affair. This Society is to be commended for securing such an able Chairman, and the committee as a whole.

Exhibits this year will be better than ever before. These have been selected carefully and no other than reliable ethical concerns are permitted. There will be many scientific displays that will be of unusual interest. A feature of the meeting is that all five sections and all general meetings will be in the same building with the exhibits.

Hotel facilities in the tri-cities, Moline, Rock Island and Davenport, are adequate to take care of a very large attendance. The Committee on Arrangements will attend to all reservations as rapidly as the applications are received.

Exceptional plans are being made for the entertainment of the ladies, many of whom, it is hoped, will be present this year. With the excellent railroad and hard-road systems leading into the tri-cities, Moline is accessible from all parts of Illinois, for those who will drive, ample facilities for caring for their cars will be arranged. Plan now to attend your meeting, the seventy-seventh annual meeting of the Illinois State Medical Society at Moline May 31, June 1-2, 1927.

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#### DOCTORS DESIRING TO READ PAPERS AT THE STATE MEETING QUALIFY AT ONCE

Members of the Society who are interested in presenting papers before any of the sections at Moline, May 31, June 1, 2, 1927, are requested to write either the chairman or the secretary of the section in which he is interested, giving the title of the paper and the full address of the author.

It is customary to divide the papers in each section equally between members of the Chicago Medical Society and the Downstate Societies.

The Committee on Arrangements at Moline has just reported that all sections will meet in the same building, the same that will house the

exhibits, registration and information headquarters.

This arrangement will add materially to the interest of the meeting and all efforts are being made to have an unusually large attendance for the 77th annual meeting.

#### SECTION OFFICERS

##### Section on Medicine:

Leroy H. Sloan, chairman, 1180 East 63rd Street, Chicago.

J. L. Sherriek, Secretary, Monmouth.

##### Section on Surgery:

E. P. Coleman, chairman, Canton.

J. R. Harger, secretary, 25 East Washington Street, Chicago.

##### Section on Eye, Ear, Nose and Throat:

Louis Ostrom, chairman, Rock Island.

C. F. Yerger, secretary, 4100 West Madison Street, Chicago.

##### Section on Public Health and Hygiene:

H. V. Gould, chairman, 1214 Berwyn Avenue, Chicago.

A. A. Crooks, secretary, Peoria.

##### Section on Roentgenology:

E. S. Blaine, chairman, 5 South Wabash Avenue, Chicago.

Harold Swanberg, secretary, Quincy.

It is requested that the Chicago Medical Society members write to the Chicago officers, and the Downstate men get in touch with the other members so that there will be no confusion, and the programs can be arranged in such a manner that the 1927 annual meeting will be one long remembered.

The officers of the five sections of the Illinois State Medical Society are anxious to arrange their respective programs as early as possible. The programs next year will be conducted somewhat differently from those of former years, and should make the meeting more attractive than ever before.

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#### MAKE HOTEL RESERVATIONS EARLY ILLINOIS STATE MEDICAL SOCIETY ANNOUNCEMENTS

The seventy-seventh annual meeting of the Illinois State Medical Society will be held in Moline, May 31, June 1-2, 1927. In anticipation of one of the largest and best meetings in the history of the society, the committees on arrangements have inaugurated extensive prepa-

rations for the meeting and entertainment of the Society.

The committee on hotel accommodations urge that reservations for the meetings be made early.

The hotels have agreed that reservations may be made directly through our Hotel Committee. Those wishing to make reservation will please address Dr. G. D. Hauberg, chairman, Hotel Committee, Moline, Ill., stating hotel preference, etc.

Below will be found a list of the principal hotels in Moline, Rock Island and Davenport:

#### MOLINE HOTELS

##### *Leclaire Hotel:*

200 rooms and 70 apartments. Can accommodate about 400 persons.



Leclair Hotel, Moline, Ill.

##### Rates—

- \$3.00 for a single room with tub and shower bath.
- \$4.50 for a double room with tub and shower bath.
- \$5.50 for a room with twin beds for two persons.
- \$8.00 for a room with twin beds for four persons.
- \$2.50 for a bed in an apartment.

##### *Campbell Hotel:*

Can accommodate about 25 persons.

##### Rates—

- \$2.00 for room with bath (single).
- \$3.00 for room with bath (double).
- \$1.50 for room without bath (single).
- \$2.50 for room without bath (double).
- \$1.25 for room with single bed.
- \$1.00 each for rooms with two full beds, four in room.

All rooms have hot and cold water, shaving mirror, etc.

##### *Hotel Mayfair:*

- \$1.50 per person, 2 in room, without bath.
- \$2.00 per person, 2 in room, with bath.
- \$4.00 for double room.

#### ROCK ISLAND

##### *Hotel Fort Armstrong:*

80 rooms. Can accommodate 160 persons.



Fort Armstrong Hotel, Rock Island, Ill.

##### Rates—

- \$2.25, \$2.50, \$3.00, \$3.50, \$4.00.
- \$2.00 per person extra.

##### *New Harper Hotel:*

75 rooms available.

##### Rates—

- \$2.00 to \$2.50 for single room with bath.
- \$1.50 for single room without bath.
- \$4.00 to \$4.50 for double room with bath.
- \$2.50 to \$3.00 for double room without bath.

##### *Como Hotel:*

50 rooms available.

##### Rates—

- \$1.75 to \$2.50 for single room with bath.
- \$1.00 to \$1.75 for single room without bath.
- \$2.75 to \$4.00 for double room with bath.
- \$2.00 to \$2.50 for double room without bath.

##### *Hotel Harms:*

25 rooms available.

##### Rates—

- \$1.50 for single room without bath.
- \$2.00 to \$2.50 for single room with bath.
- \$3.50 to \$4.50 for double rooms.
- All outside rooms; running hot and cold water.
- Rock Island, 10 minutes by auto from convention headquarters; 20 minutes by street car.

#### DAVENPORT HOTELS

##### *Hotel Blackhawk:*

About 100 rooms available.



## Rates—

Rooms with lavatory and toilet, \$3.50 and \$4.00 per day.

Rooms with shower bath, \$4.00 and \$4.50 per day.

Rooms with tub bath, \$5.00, \$5.50, \$6.00 and \$7.00.

The above rates are for two people in a room. Davenport 15 minutes by auto and 40 minutes by street car.

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THE LOCAL COMMITTEES ON ARRANGEMENTS OF THE ILLINOIS STATE MEDICAL SOCIETY ARE AS FOLLOWS:

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Dr. W. D. Chapman, Silvis, Chairman, Advisory and Publicity.

Dr. K. W. Wahlberg, Moline, Chairman, Finance.

Dr. J. W. Seids, Moline, Chairman, Reception.

Dr. H. A. Beam, Moline, Chairman, Meeting Place.

Dr. F. J. Otis, Moline, Chairman, Clinical Material.

Dr. F. N. Davenport, Moline, Chairman, Eye, Ear, Nose and Throat.

Dr. G. D. Hauberg, Moline, Chairman, Information and Hotel.

Dr. T. L. Thomson, Moline, Chairman, Sports, Golf and Airplane.

Dr. D. B. Freeman, Moline, Chairman, Entertainment and Transportation.

Dr. Hada Carlson, Moline, Chairman, Ladies Entertainment.

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THE SCIENTIFIC SERVICE COMMITTEE REPORTS PROGRESS

February 11 Dr. James G. Carr of Chicago and S. E. Munson of Springfield held a clinic on Cardio-vascular Disease before the DeWitt County Society at Clinton. The secretary, Dr. Marshall, writes that it was a very profitable meeting.

March 10 Dr. L. H. Sloan of Chicago and J. W. Barrow of Carbondale will give a clinic on Cardio-vascular Disease before the Union County Society at Anna.

March 25 Dr. A. A. Goldsmith of Chicago will present the subject "Gall Tract Disease" before the Marion County Society at Carbondale.

Dr. Harold Swanberg of Quincy compiled a list of subjects regarding the diagnostic and therapeutic uses of x-ray and radium which are now available for county societies,

Various members of the committee are reviewing some of the more recent books in an attempt

to find some that are brief, concise and accurate for the use of busy men who have little time for anything but the essentials of the subject. The following books have impressed us favorably:

"Modern Views on Digestion and Gastric Disease," by Hugh MacLean. (Published by Paul B. Hoeber & Co., New York.)

"Modern Methods in Heart Disease," by Francis Heatherley. (Published by Wm. Wood & Sons Co.)

JAMES H. HUTTON, Chairman.

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BOOZE AND BEVANISM PROVE BOOTLEG COMBINATION TOO STRONG FOR ETHICAL PHYSICIANS TO STOMACH

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PROTESTS FLOOD COUNTY SOCIETY COUNCILS AND EDITORIAL OFFICES

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THE CHAIRMAN OF THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS SPEAKS WITH THE SELF ARROGATED AUTHORITY OF A NEW BAHÁ' ULLAH FOR THE PHYSICIANS OF THE LAND

Dr. Arthur Dean Bevan smashed an odoriferous egg in his sweeping public accusation of "bootlegging," made against his fellow-practitioners. Sentiment among physicians towards this false and unjust charge may prove to Dr. Bevan something that he has not learned: That it is easier to crack an egg than to put it together again. Also that sulphuretted hydrogen has especially staying qualities.

*"More than ninety-nine prescriptions out of a hundred written for a pint of whiskey are bootlegging prescriptions and are a disgrace to the great medical profession."*

This statement, made by Dr. Bevan on Feb. 14 in Chicago during the annual congress of the council on medical education and hospitals of the A. M. A., of which the veteran surgeon is chairman, was reported broadcast in the lay press.

Simultaneously the voice of the profession was heard in protest all over the land. Men and women, both prominent or comparatively obscure in the practice of medicine, and who do not use alcohol themselves in any form, and who rarely

if ever prescribe it, were cut to the quick and choked with righteous indignation.

Letters have been written in wrath taking issue with Dr. Bevan's remarks. The gist of this correspondence, and the epitome of hundreds of telephoned retorts runs, "What right has Bevan to get up in a public meeting and make such a statement? How does he know what doctors do outside of himself and his own immediate staff? Has he been conducting an investigation of the dispensing of medicines all over the land? Where does he get his so-called facts? Let him speak for himself, until he finds out what he is talking about!"

It is interesting to note that although the Journal of the A. M. A., under date of February 26, 1927, gives the lead article to a publication of the speech made by Dr. Bevan at this meeting, and printed from a copy sent in by him to the Journal in advance of his making this speech, that this objectionable statement fails to appear. Inquiry at headquarters divulged the information that *these sentences had been deleted before the paper went to the printer*, and that the deletion was made in the offices of the A. M. A.

If Dr. Bevan were not at present holding an important office with the A. M. A. his arraignment against his confreres would lack weight in the eyes of the laity, even though it could not fail to bring the blush of wrath to the faces of his fellow practitioners. As it is, there is no comfort for these unjustly accused ones to reflect that the race of Judases did not die out with that hanging in the shadow of Calvary. The breed lives on, mixed with the blood of reckless Ananias and venomous Sapphira.

If Dr. Bevan has in his library a set of the works of William Shakespeare is it amiss to ask that he shall turn and read the poignant paragraph:

"Now, in the names of all the gods at once, upon what meat does this, our Caesar feed, that he has grown so great?"

With Dr. Bevan, this Gargantuanism appears to show itself in the inability to "guide his sense of criticism and his art of phillipics as well as he does his stethoscope or his scalpel. He has said some things that are hard for his professional brothers to swallow because it is putting a one-man opinion out as a general hypothesis," and also because this one-man opinion is not the truth.

It may not be, of course, that Dr. Bevan is bordering upon the attainment of those delusions of grandeur that impel him to believe that whenever he looks into the mirror he views an embodiment of divine right. Nor that what he says is altogether and always just and righteous. If Dr. Bevan is of opinions at all of this nature—and this whiskey pronouncement would appear to be an index of some such condition—then someone should tell him directly and forcefully that he is traveling on the way that makes everyone else fatigued beyond endurance. Also that for less vicious and more excusable mudslinging than this many a better man than he has been called to strict account.

His attack is all the more terrible and outrageous because it was a knife thrust in the dark. The very men who helped to put him where he is among the organized officialdom of their profession were absolutely at his mercy when he got up and made this attack upon their medical ethics and their loyal and honorable citizenry. They were defenseless. Thousand of physicians throughout the country failed to realize that all but one per cent. of themselves, according to Dr. Bevan, were lawbreakers and federal criminals until this information was distributed from Maine to Mexico by the power of the lay press.

In that press, Dr. Bevan was quoted correctly. There was no mitigating circumstance. In fact he went right along as one paper and one correspondent remarked and "red-lacquered the profession in the red-lacquer room of the Palmer house."

Now the subject of Dr. Bevan's paper was "The Need of Teaching Medical Ethics." It is surmised that there could be fewer charities greater than teaching Dr. Bevan that "learning begins at home." In the introduction to his talk Dr. Bevan said, "Possibly the most essential asset in life is character—the acceptance of a moral code to guide our actions."

Does Dr. Bevan consider it moral to assault the dignity of his confreres by an accusation that it would probably cost him much time and money to support and that he can not substantiate. Since when did Dr. Bevan become a public and private upholder of the tenets of the blue and white ribboners? And has he read that of which he speaks, so fluently in his address, that section of the "Principles of Medical Ethics," of the American Medical Association dealing with



"The Duties of Physicians to Each Other and to the Profession at Large"? One would consider that to speak the truth intelligently would be one of the first points emphasized, first, last and always. Further information is given that other objectionable and undignified features of Dr. Bevan's paper beside the one-per-cent-whiskey affair was cut from his paper as submitted for publication in the Journal of the A. M. A.

Now if that statement is a sample of what was deleted, then God help the profession from any more Bevanism. For that one-per-cent-legitimate, 99-per-cent-bootleg statement of Dr. Bevan is a gratuitous, false and insulting remark.

There is as much excuse for Dr. Bevan's stating to the world at large or to any of his chosen confidantes that more than ninety-nine per cent. of the prescriptions written for whiskey are bootleg as there would be for the world at large or for any member of the profession to assert that because a few doctors are constantly saturated with liquor that doctors form a profession of inebriates.

To blackguard the profession appears to be a favorite indoor sport of some physicians. How terrible to be a bird that befouls its own nest! Only too often this traducing of their own profession is done in a mad lust to secure a temporary and sensational publicity. These complexes—abused though the term be—that incite some men and women to satisfy this spotlight craving at any cost are never the results of a well balanced mentality, nor do they emanate from a "*mens sana in corpore sano*." Instead such mountebank tricks bespeak a man, "Wiser in his own conceit than seven men that can render a reason."

To remedy such a condition is often hopeless, even though a man be pulled down from his tinsel covered, cardboard throne. Can any modern voice be more poignant in its advice than that proverb reading "Though thou shouldest bray a fool in a mortar among wheat with a pestle, yet will not his foolishness depart from him." And such will continue to put out as a general hypothesis what is merely a one-man opinion or hazard.

It might seem that nothing that Dr. Arthur Dean Bevan has ever done for his profession

would help it quite so much as his taking himself out of it.

Dr. Bevan has clearly outlived his usefulness in his present official position in the American Medical Association. His nauseating monotonous monologue of abuse of the profession that has honored him far beyond reason, coming year after year in never ending tirade, is "too much."

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#### GREAT BRITAIN FOLLOWS IN FOOT- STEPS OF MEDICAL PROFESSION IN UNITED STATES IN QUES- TION OF HEALTH EDU- CATION OF GENERAL PUBLIC

Again does the American physician have opportunity to pat himself on the back for his wisdom and vision in behalf of the progress of medical science.

Controlled publicity for discoveries in medicine and for the application of these discoveries emerged long since from its swaddling clothes, here in the United States. Illinois, it is a matter of pride to remark, is one of the states at the forefront of the movement to let the public know what the medical profession is doing in order to bestow on our civilization that *sine qua non* for success—health.

Great Britain has been canny enough to "take a leaf out of America's book." Recently one of the leaders of medical progress in the United Kingdom, Sir Thomas Horder, told the British Medical Association that "the public demands public health lectures and must have them."

The titled Briton might have gone a step further and told his confreres what American physicians found out long ago, that to take the public into its confidence was the surest way that the medical profession could find, to protect the public from its inherited belief in the primitive traditions of medical magic. This is an age of miracles. Our everyday conveniences from telephone, gas and electrical stoves and heating and illumination and vehicles propelled by chemical and mechanical means would have been almost unbelievable wizardry so recently as a century, or even a half century ago.

Doctors have been so busied in finding out the speediest fashion in which to make the people well and in doing it, that they sat absorbed in these tasks until chance brought to their notice the outrage happening all around. This outrage,

worse than any Armenian atrocity, was the pil-laging and pilfering by charlatans of medical research and the turning of this arrant thievery to their own pecuniary profit at the expense of their victims. A name, the principle of a method, the elements of a theory are easily appropriated by any man willing and eager to stop long enough to hear about them. Let this man be so vicious as to arrogate to himself a skill that he possesses not, buy up plenty of advertising space in the lay press, hire enough lecturers to cover every town in the county, put on a sublimated medicine show, and watch the suckers run!

A suffering public, as has well been said in a recent issue of *Liberty*, "make all haste to patronize those charlatans and quacks, who are free to use publicity, have seized upon the newest methods, and lacking either education or experience are preying upon patients and doing great harm through the ignorant misuse of modern methods."

To combat this prostitution of science at the expense of ailing humanity, the problem of publicity that would be impersonal as to the individual doctors yet just and fair to the most essential modern science is being combated in the United States through bureaus of lay education, sanctioned and sponsored by the national, state and county organizations of ethical doctors. While such work hitherto may have been unethical in Great Britain, the bars were let down long since in America.

The Illinois State Medical Society, for example, can cite with pride to the work done by its committee in charge of such education.

The giving of public health lectures, whether by radio broadcasting, in halls and through the lay press, while an innovation in the United Kingdom, is taking on the aspect of a settled custom in the United States. This countenancing and encouraging of information as to where a man can go to secure proper treatment when he is ill, and of how many new methods and appliances there are for both prophylaxis and cure of all "the ills that flesh is heir to," is as necessary in this advancing civilization as a directory of streets or of motor routes.

Let not the most conservative feel that this is a weakening of the barrier of "ethics" that potent, yet invisible line, dividing the "false and true."

## COUNTY MEDICAL SOCIETIES SHOULD HOLD DECISION AS TO LAY CO- OPERATION IN PUBLIC HEALTH EDUCATION

Co-operation of educational committees and lay organizations must of necessity be guided by some sense of ethics. It would seem requisite, at the outset of an intensive campaign to give health information to the public, that no errors should be made as to which groups of lay educators the medical profession extends the hand of co-operation.

In order to avoid invidious contacts it should be made plain without delay that lay groups in any locality with which ethical physicians plan to co-operate will be submitted for the approval of the county medical society, the decision of which society shall be arbitrary.

Lay organizations frequently misunderstand the position of organized medicine in the general health movement. There have been instances when the contact of the lay group has not been with the representatives of organized medicine, but in certain instances with individuals who did not represent the medical society. For mutual protection and achievement of the requisite end, this county decision would appear to be indicated. In case of doubt on the part of the local society, communication should be had immediately with the Education Committee of the State Society at 58 East Washington street, Chicago, and the matter referred for prompt advice and counsel.

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## THE NURSING SITUATION

The question of the training of nurses also deserves consideration. Many physicians believe, and rightly, that the present demands of the trained nurse as to pay and hours are excessive and beyond reason, and further that by various rules of their organizations, and laws passed through their efforts, standards have been set up which are extreme and keep out of training many capable women.

On the other hand, there is much reason in the demands of the woman who is permitted to append the letters R. N. to her name. In many instances she must be a high school graduate before she is admitted to a training school. This means a period of self maintenance, or maintenance by parents; that it is an unproductive period so far as financial returns are concerned.



Then she is forced to spend full three years in the hospital, where she works hard, and is required to store her mind with many things far beyond her future sphere of usefulness. If you examine the books for nurses now on the market you will find they deal with fairly advanced bacteriology, embryology, minute anatomy even to the extent of stating the epithelium lining the different parts of the alimentary canal, chemistry, physiology, materia medica, and other subjects. On these topics she is examined by the staff if she is to graduate and then is asked questions by a state board of examiners along these lines and has to pay a fee for it. During her period of training her pay has been usually very scanty. In other words, she has done a large part of what a medical student has done and a lot of hard manual labor and night work which he has not done.

Manifestly every one today, nurses, doctors, and by no means least, patients, are suffering from another attempt at the fixation of things by standards. Laws have been passed which say that a woman shall not announce herself as a registered nurse unless she has reached certain standards and a condition has resulted which is equivalent to passing a law that every woman who takes care of the sick shall have a highly trained mind. The specious argument is made that no untrained person should be permitted to care for the sick and then this self-evident fact is extended so that no one except a super-trained woman shall do so. The result is that the laws designed to protect or help the sick defeat their purpose, for the number of sick who can afford to pay a nurse \$35 to \$45 a week, her board and washing, is very limited, and, if the patient is very sick, can still less afford to pay for three nurses on eight-hour shifts, or even two on twelve-hour shifts. No vocation in life can be run on such a rigid basis, much less one charged with service to humanity.

Attempts have been made to have laws passed to the effect that nurses shall be allowed to work only eight hours. We have, therefore, in this matter of nursing another instance of the abuse of standards. The remedy undoubtedly lies in meeting demands as in all branches of business. Certain well qualified women of high mental capacity should be trained to be super-nurses so

that they could supervise the preparation of a surgical clinic, prepare ligatures, make certain tests, and carry out or prepare to carry out, laboratory tests. But the great mass of women who possess enough tact and ability to nurse the sick never need such training and never use it.

The woman of good intelligence who has passed one year or even six months in the wards of an active hospital is perfectly qualified to nurse every case of typhoid fever or pneumonia that will occur. Furthermore, she is qualified to look after the majority of surgical cases unless the surgeon has no assistants or is so busy that he does not do the dressing himself. Special training may be needed for a nurse in a bronchoscopic clinic or in an eye clinic, but this could readily be given in an additional postgraduate course of a few weeks. To use a somewhat crude simile, at the present time we might as well say that no man shall be employed as a clerk in a store or a bank unless he shall first have passed three years with practically no pay but hard labor in a clerking school. It is entirely correct to have certified public accountants, but it is recognized that such training is utterly absurd for clerk or salesman who perform ordinary tasks.

If my thought is to be formulated, the letters R. N. should mean that the individual is a highly trained, extra-trained woman. Or that such a nurse be identified with the letters S. R. N., the "S" meaning "Special." At present all of them, good, bad or indifferent, have the same designation, and many of them capable of passing an excellent but difficult written examination are not as well qualified to deal with a sick person as a woman who has tact, gentleness and certain essential personal qualities even if she has no training at all. Education is less needed than intelligence. The mystic symbol R. N. means no more to the physician when he seeks a nurse for a given case than would the letters X. Y. Z., for in nursing, even more than in the practice of medicine, the personal attributes of the nurse are the chief factor, for she lives with the patient and can make his or her illness as happy as possible or as unhappy as possible. I have had an untrained woman take the pulse, respiration and do all necessary things with the utmost satisfaction to patient, family, and myself and I have had a "trained"

woman upset the whole menage to such an extent that the patient lay awake all night; so did the father and mother, and the servant rebelled, so that she was a curse instead of a benediction. Recently, in my experience, a R. N., placed on night duty, with no service required save that she be on watch, went to sleep two consecutive nights on a couch she prepared for herself and when asked what she meant by such conduct said she went to sleep "because there was nothing to do." She was as guilty as is a sentry who, if he goes to sleep on duty in war time, is shot because he has endangered that which he was trusted to guard. These faults were not due to "training," except her mistaken feeling that as she was "trained" she was at liberty to do as she chose. The letters R. N. simply indicated that while she had passed the state board the one thing it had failed to test as to her fitness was common sense and sense of duty.

We ought to have nurses trained one year and licensed if you will, others trained two years, and still others trained possibly five years for some special service, and we ought to insist on this not for the sake of nurses, but for the sake of hosts of sick people who now go without a nurse just as they go without other high priced luxuries. At present hospitals require an excess of training for three years because the nurses have obtained laws making a three-year course essential.

I repeat that to expect a woman to put in three years of hard physical work and study and ask her to take what is small pay in view of these efforts is unjust. It is right and proper, however, that a woman should be taught to be useful in the sick room by a brief course and receive less pay than her highly trained sister, and this is what the demand should be, unless we are going to standardize butlers, clerks, clergymen, lawyers, actors, car conductors, etc.

On occasion like this flowers and flowery words are profusely distributed. Nurses are told that they belong to a "profession" in the sense of a standard of high ideals. There is danger of the modern nurse losing ideals and making her pursuit a trade in which the motto is "take all the cash the traffic will bear." Ultimately such errors lead to their correction by force of circumstances and the correction will in my

belief lie in this that the large demand for nurses will be met by hospitals training a certain number for only six months or one year and giving them a certificate to that effect. A legislative act may prevent her from being an "R. N.," but no law can prevent me as a physician, or any man as a citizen, from employing a respectable woman to take care of his sick. Labor union methods may be needed in certain trades, but are anathema if one thinks he or she is a member of a profession. From Hobart A. Hare, M.D., to the graduating class of the Training School of Lankin Hospital.

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### CALLS FOR U. S. CONFERENCE ON BOOZE DEATHS

Dr. Mathias Nicoll, Jr., State Commissioner of Health, New York, has suggested to the United States Surgeon General that he call a national conference to consider the alarming increase in deaths from alcoholism which is "fully as disturbing as the increase of deaths from cancer and heart disease."

The conference which "would discuss possible ways and means of prevention or reducing to a minimum this menace to the health of our country," will be called at Washington in May, Dr. Nicoll believes.

### DEATHS CONSTANTLY INCREASING

"Alcoholism in this country is at present the cause of death and sickness of ever increasing thousands," Dr. Nicoll says. "Whether it can be controlled or even modified by police regulations remains to be shown. That it is not being so controlled must be obvious to any unprejudiced mind."

### TOLL BY STATES SHOWN

"In Florida the 1926 rate," Dr. Nicoll disclosed, "was nearly three and one-fourth times that of 1920; in Minnesota it was five times that of 1920. In New York the rate was almost six times. For the whole United States registration area, the rate in 1925 was over three and one-half times what it was in 1920."

Dr. Nicoll said that the records of one insurance company reveal that alcoholism accounted for 2,270 of deaths in sixteen million insured policy holders in this country, while of the million policy holders residing in Canada only twenty-five deaths occurred from this cause.



## A DOCTOR FOR ADMINISTRATOR OF FEDERAL PROHIBITION IN THIS DISTRICT

The medical profession is entitled to have one of its members as Administrator of the Prohibition Department in this District.

Congress has placed in our hands the prescribing of liquor for our patients, where such medication is needed, circumscribing our actions by many rules and regulations. These rules and regulations are susceptible of different interpretations, and this latitude of interpretation may make us law violators, whatever our intentions. If a doctor transports a bottle of whiskey to a pneumonia case, is he within his rights? It is certain that this patient cannot go to the drug store, but is he in conspiracy with the druggist and doctor to break the law if he sends to the drug store for whiskey?

In the profession in this community there are many men with administrative ability sufficient to carry with credit the responsibilities of this Prohibition District.

It is high time for the medical profession to receive from the Government the recognition due when appointments are considered for administrative offices where the welfare and interests of the profession are concerned.—*Bulletin Chicago Medical Society.*

## A CHIROPRACTIC BILL BEFORE ILLINOIS LEGISLATURE—GET WORD TO YOUR LEGISLATOR ON LICENSE AND MISCELLANY COMMITTEE

The chiropractic bills known as House Bills 127 and 128 introduced by J. Robert Moore of Kewanee amends Section 60 of the civil administrative code to create a board of five chiropractors, fixing their qualifications, to act as a board of examiners in the matter of licensing chiropractors. Provides for the registration of chiropractors by the department of Registration and Education; defines the practice of chiropractice; fixes the requirements for a certificate of registration; prescribes the examination for applicants; exempts practicing chiropractors from taking examination; provides for the registration of licensees of other states and fixes examinations, license and renewal fees.

These bills are furthered and financed by

unlicensed chiropractors and a few licensed chiropractors who have aspirations to qualify for the Board of Examiners, if the bills are successful. The proposed act is loosely drawn, it has the usual "open gate" clause which makes it retroactive, taking in the many hundred now unlicensed chiropractors and many others having attended schools with practically no supervision or equipment. Any one interested in reading these bills may obtain a copy gratis from Dr. John R. Neal, chairman of the Legislative Committee, Ferguson Bldg., Springfield.

The chiropractic bill is referred to the committee on License and Miscellany. Below is a list of the personnel of that committee, we ask all doctors to make an effort to get word to their respective legislators on this committee, asking that they vote against the bill in committee.

Following are the names and addresses of the License and Miscellany Committee before which the Chiropractic Bill is now pending:

Leroy M. Green, Rockford.  
Peter S. Krump, 1700 Washburne Ave., Chicago.  
Chas. E. Marinier, 3500 W. Jackson Blvd., Chicago.  
Claude L. Rew, Harrisburg.  
Michael R. Durso, 1012 Milton Ave., Chicago.  
Sherman W. Eckley, Peoria.  
Henry Eisenbart, Waterloo.  
George T. Kersey, 656 Bowen Ave., Chicago.  
Chas. A. Mugler, 1038 N. Kedzie Ave., Chicago.  
Joseph A. Murray, 141 S. Sangamon St., Chicago.  
Wm. V. Pacelli, 771 DeKovan St., Chicago.  
Carl E. Robinson, Jacksonville.  
Shedrick B. Turner, 21 E. 28th St., Chicago.  
Calvin T. Weeks, 5850 S. Sacramento Ave., Chicago.  
Chas. L. Wood, Keenes.  
Lee O'Neil Browne, Ottawa.  
Chas. D. Franz, Freeport.  
Matt Franz, 1700 S. Halsted St., Chicago.  
Joseph Perina, 1800 Fisk St., Chicago.  
Joseph Placek, 2347 S. Kedzie Ave., Chicago.  
Charles Coia, 823 Forquer St., Chicago.  
Michael Fahy, Toluca.  
Laurence C. O'Brien, 1234 N. Dearborn St., Chicago.  
Geo. Garry Noonan, 3020 Parnell Ave., Chicago.  
Jos. A. Trandel, 1332 Julian St., Chicago.  
Harry C. Van Norman, 1859 Warren St., Chicago.

LeRoy M. Green of Rockford is Chairman of the Committee. The personnel of the Committee, however, leads us to believe that unless some very persistent work, in every district where there is a Committeeman, is done, it will be reported favorably to the floor of the House. We are asking every director to make an individual effort to get the proper contact and get to work on these Committeemen immediately. Please notify the Chairman of the Legislative Committee as to the attitude, pro or con, after such conference.

Attention is respectfully called to the great number of new members on this Committee who

have not served in the Legislature before, who are from Cook County. We believe the better method of reaching these new members is to have four or five physicians who are members of the Chicago Medical Society, and who live in the immediate neighborhood of the Legislator, see him personally, for we find a great many Legislators come down wholly uninstructed by medical men in their districts and they don't care how they vote as long as they are pleasing political friends here in Springfield. We believe the situation demands our utmost vigilance in this direction.

#### OTHER MEDICAL BILLS BEFORE THE ILLINOIS LEGISLATURE

The following bills are of more or less interest to the Medical Profession:

House Bill No. 24 introduced by Mr. Lyon, provides for the establishment, by the Department of Public Health, of a Board of Medical Examiners in all municipalities with a population over twenty thousand, and in such other communities as the Department may designate. The board is to give free medical examinations to all applicants, but is not in any case to give or prescribe any treatment.

The need for a bill of this type is not apparent.

House Bill No. 65 introduced by Mr. Tice, amends section 4 of an Act concerning jurors by exempting from jury service all legally qualified veterinarians actively engaged in the practice of their profession.

This is similar to the present law regarding physicians.

House Bill No. 118 introduced by Mrs. Elrod, amends "An Act to provide for the physical training in the public and all the normal schools," approved June 25, 1915. Gives general supervision to Superintendent of Public Instruction and provides for the appointment by him of a State Supervisor of Physical Education.

A similar bill to this was up last session, and at that time we suggested, and still think, a Department of this kind should be under the Director of Public Health and not Education. More later.

Sidney Lyon, of Chicago, introduced a bill authorizing the appointing of five Medical Examiners for each city of over twenty thousand

inhabitants to give free medical examinations.

Representative Lyon maintains that the cults are getting very bad treatment from the medical men.

House Bill No. 131 introduced by Mr. Curran, amends sections 2, 4 and 6 of the Act for licensing of chiroprodists of April 26, 1917; alters the definition of chiroprody, changes the requirements from two to four years of high school and from one to two years of professional schooling preparatory to examination for state license and adds neurology as a subject upon which candidate is to be examined.

This bill is purporting to add massage and neurology to the present curriculum and also raises the preliminary education from one to four years of high school and from one to two years of a professional course. Your Committee will recommend that neurology and massage be deleted from the bill, and from what I can gather, the increased school requirements are not meeting with favor among a great number of the legislators, feeling that it is one of the "school" bills tending to usurp the field.

Senate Bill No. 12, introduced by Mr. Swift, amends section 115 of the School Law by giving school directors power to employ school nurses.

Heretofore, School Boards were not permitted to employ nurses, as their funds were for building buildings and employing teachers. There are nearly two hundred school nurses being paid from the funds of School Boards at the present time, some Boards securing a teacher's license for them and others paying no attention to the law. This is a validating act and does not seem to be meeting with universal favor among the members of the legislature. However, further developments may arise at the Committee hearing.

The Osteopaths have broken loose again. They have introduced two bills in the House which have been referred to the Efficiency and Economy Committee. These bills are intended to make full-fledged physicians out of Osteopaths and grant an Osteopathic Board, which, of course, would set up a dual standard for the practice of medicine in all its branches.

The County Health Officer bill has been reported out of the Public Health Committee in



the Senate. Already it is in a jam, because the bill mentions nurses and does not indicate registered nurses. The Illinois Association of Registered Nurses is hostile because Senator Bohrer will not include the word "registered" as requested by them, because one of her proteges, a practical nurse, has worked in McLean County for years and she does not care to have her disturbed. The nurses threaten dire things if the bill gets over into the House.

Address all inquiries pertaining to medical legislation to Dr. John R. Neal, chairman of the Legislative Committee, Illinois State Medical Society, Ferguson Bldg., Springfield.

#### MANY STATE SOCIETIES ARE COMPILING MEDICAL HISTORY

A much neglected item in America is at last coming into its own. It is the part played by medical men in the constructive history of America. Many state societies are at present engaged in a research that will bring medical men into their own. Illinois, Iowa, Nebraska, Michigan, California, and several other of the State Societies have committees working on the problem of writing the medical history of their respective states. Michigan, the latest addition to the long list, has the following comment to make in the February issue of its official journal:

It is a monumental task and withal a highly important one, that a Committee of the State Medical Society is designated to perform—that of compiling a Medical History of Michigan. This is a work that perhaps should have been begun years ago and carried on in connection with that of the State and County Historical Societies. Through the lapse of time much of the personal and the anecdotal which lend a piquant flavor to a literary undertaking of this sort is necessarily lost. Michigan has been exceptionally favored in physician personnel and the drama of daily doings in which its medical actors participated during the romantic period of the State's early development, should be a fascinating record. How much material is still available to this end is problematic. It need scarcely be hoped that the present Committee can do more than make a crude beginning, but if it should succeed in assembling considerable data of importance for its successors not a little will have been accomplished.

#### MEDICINE SHOULD NOT BE UNDER STATE AND FEDERAL CONTROL

An editorial in the February, 1927, issue of the *Journal of the Michigan State Medical Society* is the following comment on State Medicine:

The doctors have begun to get in their shots to Monday's statement by Surgeon General Cumming of the United States health service, delivered at the public health conference in Lansing, to the effect that medical service should be under state and federal control.

"Such a scheme," declares Dr. Angus McLean of Detroit, "would destroy the scientific and social incentives which have brought the great majority of medical men into the profession, and upon which the advance of medical science must depend. It would be a mistake to reduce all medical service to the type of dead-level and directed routine work typical of a factory. I hope the medical profession has too much strength, pride and dignity, and sees too clearly the service it owes to society, ever to submit to its direction, control and remuneration at the hands of politics."

That is a strong and logical answer from a public-spirited physician. It probably represents the general reaction of physicians throughout the United States to Surgeon General Cumming's proposal, as well as the public point of view, State medicine is medical socialism, and a nation of private enterprises does not react kindly to it.

The bugaboo of physicians in this regard is the case of England, where state medicine on the insurance plan is actually in effect. But the important difference is that Surgeon General Cumming is no Lloyd George. The British plan of contributory insurance for sickness and invalidity was the exclusive achievement of the great little Welshman, who fought it through despite the original opposition of practically the entire British medical fraternity, the Conservative party and most of the British public.

Until somebody with the genius and conviction of Lloyd George rises to make state medicine a crusade there seems to be little danger of its adoption in America. We have accepted federal maternity benefits only with much protest. City clinics for the poor must be circumspect to an almost ridiculous point to avoid censure.

Even the plan of state compulsory compensation insurance for automobile accident victims meets the cry of "Socialism!" On the whole, it seems rather unlikely that Surgeon General Cumming's views will prevail in the United States. It is true that a large number of "in-between" people, neither destitute nor capable of paying without deprivation the necessarily high fees of modern hospitals, physicians and nurses, are caught in something like a millstone as matters stand. The clinics are often closed to them even if their sense of independence would not reject any resort to charity service. The consequence is a habit of dodging the doctor until the last possible moment, which often is the most expensive plan in the end.

Possibly the answer in America will be a wider popularization of the plan of preventive medicine, the annual health examination, for example, and an increase of private sickness insurance.—*Grand Rapids Press*.

#### HAREM GOVERNMENT

(New York World, March 14, 1915, Editorial)

" . . . Various organizations of women, which probably do not represent 10 per cent of the sex, maintain at times a veritable reign of terror in legislative bodies by pretending to speak in the name of all women. In consequence half the country is now bedeviled by some form or other of harem government, which is in no respect an expression of public opinion. . . . The statute books are loaded down with foolish laws dictated by a spirit of "The ladies—God bless them!"

"The question is whether America will allow itself to be degraded into a Communistic and Socialistic state or whether it will remain American. . . . In this contest there is but one place for a real American to stand."

President Coolidge.

(Speech of Sept 5, 1924.)

#### TOO MUCH ADVICE ABOUT CHILDREN

(Washington Daily News, June 18)

By Mrs. Walter Ferguson

##### HAVE MANY EXPERTS

Today we mothers have the psychology experts, the kindergarten fans, the child culture theorists, the wise men from the courts. We

hear from the social service workers, and the unmarried women, the actress and the opera singer, and all of them have something fine to tell us about how we shall rear our children. Much of our present muddle comes from the fact that we try to listen intelligently to so many different people.

About the only successful way to bring up children is to tackle the job yourself and figure out the best way, according to the strangeness and the mysterious nature of the child with whom you must deal.

##### CAN'T LEARN FROM BOOKS

You have to bring intelligence to the task. You can't learn from lectures, nor school books the qualities which will enable you to train boys and girls. Only the Lord can actually help you, and it is best not to leave too much of the job to Him.

All the children in one family may be as unlike in nature as if they were strangers. Each of them will demand a different rule for his rearing. You simply can not manage them all in the same way.

If we mothers would only get down to business and do our very best to look after our own children there would be no need of so many organizations to look after the rising generation.

#### STATE MEDICINE MOVES ON

In announcing the completion of the new North End Clinic's home, the gift of Mrs. Leopold Wineman, we are interested in the comment that as soon as feasible the clinic will be put upon the basis of the Cornell Clinic in New York, where it is claimed that success has attended the effort to shoulder some of the burdens of the high cost of medical service for those of small means. We may add that much criticism has attended "the successful operation" of the Cornell Clinic in New York since it is alleged to effect the results attendant upon any commercial organization for medical treatment as far as fees and dividends are concerned. It has been stated that the great majority of the "needy" cannot afford service through the Cornell Clinic.

Another approach towards state medicine and an indication of the trend of lay thought is disclosed in a news item published in a Y. M. C. A. periodical, "*Detroit Young Men*." On October



26, 84 men voted in favor of the adoption of what they are pleased to term a health insurance plan whereby the services of a physician shall be available to men in the dormitory at all times at no other cost than a monthly fee not exceeding fifty cents. The insurance would cover all cases of sickness and first aid attention in accidents and the physician would also be on call for men confined to their beds.

We note that there were 39 men who opposed this plan—we wonder why. Have they by any chance been made familiar with the disinterested care which attends such schemes of cheap service? The Panel system in England discloses constant dissatisfaction among the beneficiaries.

We mention these two news items not so much in criticism, as to indicate the trend of the times—as indicative of the feeling that health is a birthright—perhaps it is. The question, however, arises as to the best way of conserving one's birthright. Is it a financial question? There are abuses that prevail in the practice of medicine as there are in the practice of law, selling of groceries, and the publication of "gyp ads" in the newspapers. But they are not common abuses. The "suffering public" usually gets what it pays for.—*Bulletin Wayne Co. Medical Society.*

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#### ANOTHER DECISION IN FAVOR OF THE MEDICAL PRACTICE ACT HANDED DOWN BY THE ILLINOIS SUPREME COURT

THE PEOPLE OF THE STATE OF ILLINOIS, DE-  
FENDANT IN ERROR, V. A. HAWKINSON,  
PLAINTIFF IN ERROR

Mr. Justice Heard delivered the opinion of the court:

September 3, 1925, an information on behalf of the People of the State of Illinois was filed in the county court of Hancock county, the first count of which charged that plaintiff in error on the second day of September, 1925, held himself out to the public as being engaged in the diagnosis and treatment of ailments of human beings as a business or profession, without having a license as required by the Medical Practice act. The second count charged that on September 2, 1925, he treated human ailments by a system or method known as chiropractic without having a license so to do. February 1, 1926, plaintiff in error filed a plea in bar, to the effect that at the

April term, 1925, of the county court of Hancock county he was tried and convicted for the same offense as that alleged in the information of September 3, 1925. The State's attorney filed a demurrer to this plea, which demurrer was sustained. Plaintiff in error then entered a plea of not guilty, and upon trial by a jury he was found guilty upon both counts of the information. Motion for a new trial being overruled he was sentenced on each count to pay a fine of \$100 and to be confined on the Illinois State farm at Vandalia for the term of sixty days, the sentences to run concurrently. To review this record plaintiff in error has sued out a writ of error from this court.

It is first contended by plaintiff in error that the Medical Practice act, and particularly that portion of it prescribing the requirements of an applicant for a license for the practice of any system or method of treating human ailments without the use of drugs or medicines and without operative surgery, is unconstitutional, in that it provides that before an applicant may take an examination he must be a graduate of a school which is reputable and in good standing in the judgment of the Department of Registration and Education. Plaintiff in error's position is that this is a delegation by the legislature of its legislative functions to said department, and is therefore invalid. Legislative power is the power to enact laws or declare what the laws shall be. Judicial power is the power which adjudicates upon the rights of citizens and to that end construes and applies the law. The legislature cannot deal with the details of every particular case, and the manner of executing a law must necessarily be left to the reasonable discretion of administrative officers, and the exercise of that discretion does not constitute the exercise of judicial power. (*Board of Education vs. Board of Education*, 314 Ill. 83.) An administrative agency empowered to issue licenses to engage in certain professions must necessarily exercise quasi judicial power in determining whether a license shall be issued, but the exercise of this power is only incidental to the duty of administering the law relating to the regulation of a particular calling or profession, and in so doing it is not exercising judicial power within the meaning of the constitutional provision that no person or collection of persons being one of

the three departments of the State shall exercise any power properly belonging to either of the others, except as in the constitution expressly directed or permitted. (*Italia America Shipping Corp. vs. Nelson*, 323 Ill. 427.) While the legislature cannot arbitrarily interfere with the enjoyment of rights guaranteed by the constitution and cannot invest any board or commission with arbitrary discretion, which may be exercised in the interest of a favored few or which affords opportunity for unjust discrimination, (*Noel vs. People*, 187 Ill. 587), it is a matter of common knowledge that in the past there have been medical schools of all kinds, from those of the highest standing to the fake school or so-called "diploma mill," and manifestly it would be absolutely impossible for the legislature itself to pass upon the qualifications of all the various schools in the country and upon the qualifications of their graduates, and this power must therefore be lodged in some administrative body. Section 20 of the act provides that the "act shall not be so construed as to discriminate against any system or method of treating human ailments, or against any medical college, or any professional school, college or institution teaching any system or method of treating human ailments." The department, under the act, is not permitted to act arbitrarily, and its actions in the premises are subject to review by the courts. (*People vs. Witte*, 315 Ill. 282.) The act itself fixes minimum standards of professional education to be enforced by the department in conducting examinations and issuing licenses. In *People vs. Walder*, 317 Ill. 524, (a case in which a chiropractor contended that this act was unconstitutional), this court said: "This act meets the constitutional objections which rendered void the earlier medical practice acts and is valid legislation."

The only other point discussed by plaintiff in error is that the court erred in sustaining a demurrer to the plea in bar of former conviction. There was a plea of not guilty in this case, and under our Criminal Code a plea of former conviction or acquittal is unnecessary, and a defendant may under the plea of not guilty introduce evidence of a former conviction or acquittal. (*Hankins vs. People*, 106 Ill. 628; *People vs. Brady*, 272 id. 401.) It was therefore not error to sustain the demurrer. (*Hankins vs. People*,

*supra*.) The record of the former conviction was competent evidence in this case, but the uncontroverted evidence in the case shows that after the filing of the information alleged in the plea, and prior to the filing of the information in the present case, plaintiff in error was guilty on both counts of the information, and the result in this case could have been in no manner affected by the introduction in evidence of the record of the former conviction. No point in made in plaintiff in error's brief and argument that the court erred in its rulings upon the admission of evidence.

The undisputed evidence shows that defendant is guilty in manner and form as charged in both counts of the indictment, and the judgment of the county court must therefore be affirmed.

Judgment affirmed.

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#### PROGRESS OF THE MEDICAL AND DENTAL ARTS CLUB

The annual meeting of the Medical and Dental Arts Club was held on Tuesday, Feb. 15, 1927. In accordance with a notice which had been duly sent to each member, 122 members were present in person or by proxy. After reports from the various officers, boards and committees of the progress of the past year, formal resolutions approving the acts of the officers and the board of directors were unanimously adopted. The following resolutions were also adopted:

*Resolved*, that the members of the Medical and Dental Arts Club do hereby give the consent of the corporation and do hereby authorize the Board of Governors and the officers of the corporation to borrow money to be used for the purpose of the corporation and to pledge its property therefore, in addition to all other moneys heretofore borrowed by the corporation either for taking up the present 7 percent. second or junior mortgage bonds in the principal amount of \$430,000 or any part thereof by a mortgage to the Continental and Commercial Savings Bank as trustees and by executing and delivering second or junior mortgage bonds of a new issue but of a greater amount in lieu thereof, and by placing a new and additional junior mortgage on the property of the corporation and to execute and deliver any and all bonds, notes, trusts, deeds, mortgages, statements and other papers in connection therewith, all in the discretion of the



Board of Governors with regards to amount, terms, conditions, rate of interest, maturities, discount and sale price.

*Resolved*, that the Board of Governors and the officers of the Medical and Dental Arts Club be and they are hereby authorized in their discretion to organize a building corporation to take and hold title to the corporation's building and site as, if and when they may deem such action desirable and in connection therewith they are hereby expressly authorized to fix the terms and proportions for the issuance and distribution of capital stock to and among the members of the corporation according to their rights and classes of membership and for the issuance and sales of stock to non-members and relative rights, interest and privileges which each class of capital stock of said building corporation, and the acts and proceedings of the Board of Governors and of the proceedings of the corporation in the formation of said building corporation and the issuance and distribution of said capital stock among the respective members and the issuance and sale of capital stock to the non-members are hereby confirmed, ratified and approved.

The following members of the Board of Governors and officers were thereupon elected:

Governors, to hold office until the annual meeting of the year 1930:

Dr. M. M. Printz, D. D. S.

W. A. Pusey, M. D.

Dr. Jeremiah H. Walsh, M. D.

Officers to hold office until the annual meeting, 1928:

President, John S. Nagel, M. D.

Vice-President, John H. Cadmus, D. D. S.

Vice-President, Robert H. Hayes, M. D.

Treasurer, Harry B. Pinney, D. D. S.

Secretary, Frederick R. Green, M. D.

The meeting then adjourned to meet on the second Tuesday of January, 1928.

In accordance with the action of the club the Board of Governors since the meeting have carried out the instructions of members and have incorporated the Medical and Dental Building Corporation under the corporation laws of Illinois. The officers and Board of Directors of the Medical and Dental Arts Club have been elected as officers and members of the Board of Directors of the Medical and Dental Building Corporation. Every member of the club who has a membership contract, fully paid up, and who

has received a certificate of membership in the club will be entitled to receive stock in the building corporation in accordance with an equitable plan of distribution which is now being worked out.

The building is rapidly nearing completion. The contractors are under bond to deliver a completed building by May 15, 1927. The outside work on the building is completed, including the walls, roof, floors and permanent partitions. The elevators are being installed and the interior work is progressing rapidly. On the fifth and sixth floors are a large two-story auditorium and balcony, seating one thousand. This will be available for meetings of the larger organizations. Leases for the use of the auditorium have already been completed with the Chicago Medical and the Chicago Dental Societies. This auditorium is also available for scientific, professional, social and religious organizations needing such an assembly hall.

In addition, the fifth and sixth floors will contain office space for the Chicago Medical and the Chicago Dental Societies. There are also two smaller meeting halls, seating from 150 to 200 each, for the use of the smaller special societies. There will also be space especially for such organizations as the American Dental Association, the Institute of Medicine, the Chicago Medical Historical Society and others. For those organizations wishing to have dinner served in connection with their meetings, two special dining rooms have been provided on the 23rd floor. The 22nd floor will contain the main club rooms and offices. A lounge and club assembly room, 32x120, will occupy the entire north side of the building. This lounge will be divided into three parts—the east lounge containing a large fireplace, the central lounge a two-story courtyard or patio, in Spanish style, and a west lounge containing a fireplace, divans, easy chairs, etc. An additional space along the west front, 35x25, will be utilized for card rooms, billiard rooms, libraries and reading rooms or whatever the club members may prefer. The 23rd floor, in addition to the private dining rooms mentioned above, will contain the main dining room, seating 450, as well as the kitchens, serving rooms, ice-boxes, pantries, etc.

The rapid development of the Medical and Dental Building and its progress in the last year shows plainly that there is room for and a de-

mand for a distinctly professional building in Chicago that will be the center of activities in the medical and dental professions. The surprising advance in real estates values in the section between Wacker Drive, Michigan Avenue, Randolph and Wells Streets, as well as the amount of construction going on and proposed in this section is ample evidence of foresight shown in securing this valuable location on the corner of Wabash and Lake. The medical and dental professions of Chicago are indeed fortunate in having so desirable and centrally located a site which will without question greatly advance in value in the next fifteen years.

The entire building will be completed by May 15th. The contractors promise to have all the rented space available for occupancy by May 1. The club has already occupied the building, the offices of the club having been moved into temporary quarters on Feb. 15. The street number is 53 E. Lake Street. The new telephone number is State 5426. All members, as well as others interested, are cordially invited to come and see the new building at any time.

#### ILLINOIS STATE MEDICAL SOCIETY SPECIAL TRAIN TO A. M. A. MEET- ING OVER THE PENNSYLVANIA RAILROAD

Schedules arranged give special trains leaving Chicago at 1 p. m. on May 15 and on May 16. Also for the Illinois State Medical Society there will be special sections and special cars on limited trains, daily as follows:

##### SPECIAL—LIBERTY LIMITED

Lv. Chicago 1:00 p. m., May 14, 15, 16, 17 and 18.

Ar. Washington 9:00 a. m., May 15, 16, 17, 18 and 19.

This is a 19-hour de luxe train equipped with barber, maid and stenographer for your convenience, also club car, observation car and dining cars serving a seven-course table de-hote dinner.

##### PENNSYLVANIA LIMITED

Lv. Chicago 5:30 p. m., May 14, 15, 16, 17 and 18.

Ar. Washington 4:20 p. m., May 15, 16, 17 and 19.

This train passes through the Allegheny mountains in the day time, the famous Horse Shoe

Curve, Allegrippus Gorge, The Pack Saddle and other points of national interest.

A cordial invitation is extended to all doctors coming through Chicago to join these special parties.

Privilege of a reduced fare extended on all trains to physicians and their families.



Many doctors will no doubt wish to visit New York after the convention, and we wish to call attention to the unexcelled Pennsylvania service from Washington to New York. Trains run practically every hour. Returning to Chicago frequent Limited trains leave New York daily. *The Pennsylvania Railroad is the only railroad via Washington to arrive in New York proper. The Pennsylvania station is at 32nd St. and 7th Ave., in the heart of New York's theatrical, hotel and shopping district.*

Rates are: One-way rail fare Chicago to Washington, \$27.78; lower berth to Washington, including surcharge, \$8.25, upper \$6.60, compartment \$23.25, drawing-room \$30.00. Half fare returning, making round-trip rate \$41.67. Side trip to New York: Baltimore to New York \$6.70. New York to Harrisburg \$6.99.

##### Railroad Reduced Fare:

One and one-half regular one-way fare for the round trip: Obtain a certificate account A. M. A. Convention from ticket agent when you purchase your going ticket May 12-18, have this certificate validated in Washington at Convention headquarters. This will be honored for purchase of return ticket at one-half fare up until and including May 24. This reduced fare is available to members of your family. Consult



your local ticket agent regarding rail and Pullman fares.

Further information desired will be gladly furnished.

For reservations address C. M. Trueb, Passenger Representative, Pennsylvania Railroad, 524 Union Station, Chicago, telephone Central 7200, Local 357.

A. M. A. POST-CONVENTION TRIP TO  
BERMUDA

Many physicians from Chicago and other sections of Illinois and adjoining states, have made tentative arrangements for a voyage to Bermuda, following the A. M. A. Convention, that will close May 20 in Washington, D. C. This group contemplates leaving Chicago on the Illinois Medical Association Special Train, over the Pennsylvania Railroad, May 15 or 16, or in other special equipment provided by this railroad on their regular trains May 14, 17 or 18.

Plans are to depart from Washington, immediately after the close of the Convention, leaving Washington on the morning of May 21. The remainder of that day as well as May 22, 23 and 24 will be passed in New York City. At noon May 24, passage will be taken for Bermuda, on one of the luxurious steamers of the Furness Bermuda Line. Forty-eight restful hours at sea, and two delightful days on the Island, sailing from Bermuda on May 28, docking in New York again on May 30, entrain for Chicago, arriving there May 31.

Bermuda Islands offer attractions to suit many tastes, which should appeal to members of the A. M. A. and their families. There are splendid 18 and 19-hole golf courses, and tennis courts. All sorts of water sports, including surf and smooth water bathing, fishing and varied types of boating and sailing, as well as horseback riding. The hotels are unexcelled, and every entertainment possible is available.

The estimated expense of this journey, including all necessary incidentals from Chicago and back to Chicago, with the exception of hotel accommodations and meals while attending the A. M. A. Convention in Washington, and meals while in New York, is placed at \$225.00 per person. Lower fares will apply from cities east of Chicago, while higher rates will govern from points west of Chicago, in accordance with rail fares.

Members who prefer to travel independently to the Convention can join our party at New York City on the day of sailing. The all expense rate from New York to New York is \$115.00 per person.

An additional week can be spent on the Island at an estimated expense of between \$60.00 and \$70.00 per person.

At these rates minimum accommodations are given on the steamer between New York and Bermuda. These are comfortable, but a higher type of accommodations can be had at the additional rate provided by the regulation tariff.

If you are interested in this special journey, for further details and information, communicate with the Cosmopolitan Tours Company, 53 W. Jackson Blvd., Chicago, Ill., as this organization has the matter in charge, and all arrangements should be made through its officials.

MAKE A. M. A. HOTEL RESERVATIONS  
EARLY  
HOTELS AT WASHINGTON, D. C.

Name and Address	Single		Double		Suite
	Without Bath	With Bath	Without Bath	With Bath	
Annapolis .....	....	\$3.00	....	\$4.50	.....
11th to 12th on H Street .....	....	-3.50	....	-5.00	.....
Arlington .....	....	\$5.00	....	\$7.00	\$8.00-\$10.00
Vermont Ave. at K & 15th streets .....	....	-6.00	....	-8.00	.....
Blackstone .....	....	....	....	\$3.00	.....
1016 Seventeenth Street, N. W. ....	....	....	....	-4.00	each person
Burlington .....	\$2.00	\$3.50	\$3.00	\$6.00	\$3.00 and up
1120 Vermont Avenue .....	....	-4.00	....	-8.00	each person
Cairo .....	\$2.00	\$2.50	\$3.00	\$4.00	\$6.00-\$10.00
1615 Q Street .....	-2.50	-4.00	-3.50	-6.00	.....
Capitol Park .....	\$2.50	\$3.00	\$4.00	\$5.00	.....
North Capitol and E streets .....	-3.00	-4.00	-5.00	-7.00	.....
Chastleton .....	....	\$3.00	....	\$4.00	\$2.00 each
Sixteenth Street at R Street .....	....	-3.50	....	-5.00	person, 4 persons to suite of 2 rooms
Colonial .....	\$2.00	....	\$3.00-\$3.50	....	.....
Fifteenth and M streets .....	....	....	....	....	.....
Congress Hall .....	\$2.50	\$3.00	\$4.00	\$5.00	\$7.00
New Jersey Ave. near Capitol .....	....	-3.50	....	-7.00	.....
Continental .....	\$2.00	\$3.00	\$3.00	\$5.00	.....
North Capitol, between D and E streets .....	-2.50	-4.00	-4.00	-7.00	.....
De Sales Chambers for Men. 1735 De Sales Street .....	(Quotes a flat rate of \$2.50 a man, double and triple.)				
Driscoll .....	\$1.50	\$3.50	\$3.00	\$6.00	.....
1st and B streets .....	-2.50	....	-4.50	....	.....
Ebbitt .....	....	\$3.00	....	\$5.00	.....
H Street at Tenth .....	....	....	....	-6.00	.....
Everett .....	\$2.00	....	\$1.00	....	.....
1730 H Street, N. W. ....	....	....	....	....	.....
Fairfax .....	....	....	....	....	\$1.00-\$5.00
Massachusetts Avenue at 21st Street .....	....	....	....	....	.....
Franklin Square .....	\$2.50	\$3.50	\$1.00	\$5.00	.....
14th and K streets .....	....	....	....	-6.00	.....
Grace Dodge .....	\$2.50	\$3.00	\$4.00	\$5.50	\$12.00. Each
North Capitol and E streets (For women) .....	-3.00	-4.00	-5.00	-8.00	extra person, \$1.50
Grafton .....	\$2.50	\$3.50	\$4.00	\$5.00	.....
Connecticut Avenue and De Sales Street .....	-4.00	-5.00	....	-8.00	.....
Hamilton .....	....	\$1.00	....	\$6.00	\$20.00
14th and K streets .....	....	-7.00	....	-10.00	.....
Harrington .....	\$3.00	\$3.50	\$4.00	\$5.00	.....
11th and E streets .....	and up	-4.50	-5.00	-8.00	.....
Houston .....	....	\$2.50	....	\$2.50	.....
910 E Street, N. W. ....	....	-3.00	....	ea. person	.....
Lafayette .....	....	\$4.00	....	\$6.00	\$10.00-
16th and I streets .....	....	-5.00	....	-8.00	12.00

Lee House .....	\$3.50	....	\$6.00	\$12.00
15th and L streets	-6.00		-10.00	
	Single		Double	
Name and Address	Bath	Bath	Bath	Suite
Legan .....	\$2.00	\$3.00	\$3.00	\$4.00
Iowa Circle				
Martiniue .....	\$4.00	....	\$6.00	\$10.00-
1211 Sixteenth Street	-6.00		-9.00	12.00
Mayflower .....	\$5.00	....	\$7.00	\$18.00-
Connecticut Avenue	-12.00		-15.00	25.00
Meridian Mansions .....	\$3.00	....	\$4.00	\$7.00-9.00
			-5.00	
Metropolitan .....	\$2.00	\$3.00	\$4.00	\$6.00
615 Pennsylvania Avenue				-7.00
National .....	\$2.00	\$3.00	\$3.00	\$5.00
6th Street and Pennsylvanla Avenue	-2.50	-3.50	-3.50	-6.00
Occidental .....	....	....	....	\$8.00 for 4 persons
Pennsylvania Avenue				
Parkside .....	....	....	....	\$3.00 for 1 person;
1336 I Street				\$5.00-6.00 for 2 persons
Portland .....	....	....	\$3.50	\$4.50
Vermont Avenue and 14th Street				
Potemae .....	\$2.00	\$3.00	\$3.50	\$4.50
New Jersey Avenue and C Street, S. E.			and up	and up
Powhatan .....	\$1.00	....	\$6.00	\$10.00-
18th Street and Pennsylvanla Avenue	-5.00		-9.00	13.00
Raleigh .....	\$3.00	\$4.00	\$4.00	\$5.00
12th Street and Pennsylvanla Avenue	-4.00	-6.00	-6.00	-10.00
Roosevelt .....	....	\$4.00	\$5.00	\$7.00-
16th and V Streets	-6.00		-8.00	10.00
St. James .....	\$1.50	\$3.50	\$3.00	\$5.00
6th Street and Pennsylvanla Avenue	-3.00		-4.00	-5.50
Steneleigh Court .....	\$6.00	\$6.50	\$10.00	\$10.50
Connecticut Avenue and L and up and up Street (American Plan)			and up	and up
Tilden Hall .....	\$3.00		\$4.00	....
Connecticut Ave. at Tilden			-5.00	
Wardman Park .....	....	\$5.00	....	\$8.00
Connecticut Avenue and Woodley Road				\$15.00
Washington .....	....	\$5.00	....	\$8.00
15th Street and Pennsylvanla Avenue	-8.00		-12.00	\$20.00-
Willard .....	\$3.00	\$5.00	\$5.00	\$7.00
11th Street and Pennsylvanla Avenue	and up	-8.00	and up	-15.00
Winston .....	\$2.00	\$2.50	\$3.50	\$4.50
First Street and Pennsylvanla Avenue	-2.50	-3.00	-4.00	-5.00
				\$3.00 each person

THE A. M. A. WASHINGTON SESSION

RAILROAD RATES TO WASHINGTON

The passenger associations throughout the United States and Canada have authorized a rate of one and one-half fares for the benefit of members of the American Medical Association and dependent members of their families who will attend the annual session at Washington. To have the benefit of a return rate of one-half fare, it will be necessary for each member to secure a *certificate* from the railroad ticket agent when he purchases his ticket to Washington. The *certificate* must be certified by the Secretary of the American Medical Association, which may be done at the Registration Bureau to be located in the Auditorium in Washington, and must then be validated by a representative of the railroads who will be on duty from 8:30 a. m. to 5:30 p. m., May 16 to 20. When the *certificate* is so certified and validated, it will entitle its holder to purchase a return ticket to his home, over the same route traveled to Washington, at one-half fare. If the ticket agent at the member's home station does not have the *certificate*, he will furnish information as to where it may be obtained.

The *certificate* is not a receipt for money paid for a ticket, nor will a receipt entitle its holder to secure

a return trip ticket at a reduced rate. Be sure to ask the ticket agent for a *certificate*.

*Certificates*, properly certified and validated, will be honored for purchasing tickets for the return journey at one-half fare up to and including May 24, but will not be honored after that date. No refund of fare will be made on account of failure to present validated *certificate* when purchasing return ticket. The return ticket must be used over the same route as that traveled going to Washington. Return tickets issued at the reduced rate will not be good on any limited train on which such reduced fare transportation is not honored.

When you purchase your ticket to Washington, secure from the railroad ticket agent a *certificate*, which, when properly certified to and validated at the Registration Bureau in the Auditorium at Washington, will entitle you to purchase a return ticket to your home, over the same route traveled to Washington, at one-half the fare paid for your ticket to Washington.

Be sure to ask your railroad ticket agent for a *certificate* when purchasing your ticket to Washington.

Correspondence

MEDICAL SOCIETY CONDEMNS DOCTOR BEVAN

Centralia, Ill., February 24, 1927.

To The Editor: Enclosed find for publication in the *Journal* a copy of a letter sent to Doctor Arthur Dean Bevan, as a protest against his statement to the reporter of the *Tribune*, February 14th.

This letter should be published as the medical profession is being attacked from within as well as from without.

We are legislated against on all sides and seem to be the common dog for every one to kick around.

In the resolution passed we state that Doctor Bevan should be forced to resign from the American Medical Association chairmanship, as we feel that he is not in harmony with the majority of conscientious doctors.

The letter to Doctor Bevan is self-explanatory.  
F. M. Edwards, M.D.

Following is the letter:  
Centralia, Ill., February 24, 1927.

Dr. Arthur Dean Bevan,  
Chicago, Illinois.  
Dear Sir:

The Centralia Medical Society took exception to a statement made to the *Chicago Tribune*, if you were properly quoted, that ninety-nine out of



every hundred prescriptions for whisky that are written are "bootlegged."

We were very much surprised that a man of your standing should make a statement of this kind. If you had said, "I believe that ninety-nine out of every hundred are 'bootlegged' it would have been different, as that is your opinion, which you have a right to. But your statement in our opinion is not a fact.

Your office in the American Medical Association makes laymen think that those statements are authentic. You may think that you know the doctors of your acquaintance are bootleggers, but you certainly do not know all the doctors in the United States, and have no right to call them bootleggers. There are some doctors that do not believe in giving calomel and in giving other drugs. This is their privilege to believe.

This association thinks that you should be censured and be made to withdraw the statement that you made so public. The only mitigating part of this, is that this may be the working of an infantile mind belonging to a senile brain.

Centralia Medical Association,  
F. M. Edwards, M.D.,  
Chairman of Special Committee.

#### DOES YOUR COUNTY SOCIETY PUBLISH A BULLETIN?

Monmouth, Ill., Feb. 12, 1927.

*To the Editor:* We frequently get letters from other states asking for the names of the county societies in Illinois which publish a Bulletin. At the present time I know of only four counties which publish one, namely, Adams, Chicago Medical Society, Madison and Macoupin County.

I am sure that there are other societies in Illinois getting out Bulletins regularly, or occasionally. In order that we may get definite information along this line I would respectfully ask county secretaries that issue such a Bulletin to write to me at their earliest convenience so we can have a complete record. I would also suggest that they place our Editor on their mailing list, for no doubt many times he can get an inspiration or suggestion that might develop into one of his inimitable editorials from reading the Bulletin of a component Medical Society.

Yours very cordially,

Harold M. Camp,  
Secretary, Illinois State Medical Society.

#### UNIVERSITY OF ARKANSAS USES RADIO IN ITS MEDICAL EDUCATION PROGRAM

Fayetteville, Ark.

*To the Editor:* The enclosed news story which we are sending to many daily papers in this part of the country will be of interest to members of your state medical society.

Many of the most prominent men in the medical profession have agreed to write papers for us which will be read by Dr. Alan A. Gilbert of our Medical Extension Service. This is one of the many ways in which we use our radio for educational purposes.

We hope that it will be possible for some of the physicians of your state to hear these talks over KUOA.

Very truly yours,

A. M. Harding,  
Director.

The following is the initial announcement:

Realizing that a radio station should endeavor to broadcast programs of an educational nature as well as those of, by and for entertainment features, the University of Arkansas Radiophone Station KUOA (299.8 meters) will inaugurate a special weekly feature January 6 under direction of Dr. Allan A. Gilbert, university physician, entitled "Medical Extension Service."

Every Thursday evening at 8 o'clock a special paper on medicine or surgery (and allied subjects) will be radiophoned from this station for the benefit of the physicians, in the surrounding communities, who are urged to tune in at this time. In this way KUOA hopes to reach the doctors in the outlying communities who are too busy to attend the state or national medical association meetings.

These papers, prepared especially for this extension service, will be written by outstanding men in the medical profession in the United States—men who are the leaders and specialists in their respective fields and who are willing to give the benefits of their knowledge and research to their brother practitioners. The papers will be somewhat of a technical nature, but laymen will find much to learn and profit when they tune in on KUOA.

Among the world-famous medical men who will contribute papers in their fields are: Dr. George Dock, Pasadena, Cal., the Dean of Medical Educators; Dr. William J. Mayo, Rochester,

Minn., Surgery; Dr. F. M. Pottenger, Monrovia, Cal., Tuberculosis; Dr. Nathaniel Allison, Harvard Medical School, Orthopedic Surgery, and Dr. W. McKim Marriott, Dean Washington Medical School, St. Louis.

The program thus far included the following:

"Treatment of Malaria," by Dr C. C. Bass, Dean Tulane Medical School, New Orleans.

"Backward or Defective Children (Physical and Mental) Due to Disorders of the Ductless Glands," by Dr. Wiliam Engelbach, St. Louis.

"Symptoms, Signs and Methods Available for Early Diagnosis of Alimentary Tract Cancer," by Dr. Frank Smithies, Chicago.

"Some Aspects in the Management of Diabetes," by Dr. F. G. Banting, University of Toronto, Canada, (discoverer of insulin).

"The Cause, Treatment and Prevention of Cancer," Dr William J. Mayo, Rochester, Minn.

"The Treatment of Tuberculosis," Dr. F. M. Pottenger, Monrovia, Cal.

"Infant Feeding," Dr. McKim Marriott, Professor Pediatrics, Washington University Medical School, St. Louis, Mo.

"Periodic Health Examinations," Dr. Lewellys F. Barker, Baltimore, Md.

#### THE SUPPLY OF MEDICINAL SPIRITS

The supply of whisky, brandy and other distilled spirits, exclusive of alcohol, now available in the United States will supply medicinal needs, it has been estimated, for about five years. Four years' aging in wood is required by the U. S. Pharmacopeia before whisky and brandy are of the required potency. They cannot be lawfully sold unless so aged, in any jurisdiction in which pharmacopeial standards are recognized by law. Unless steps are taken at once to provide for the manufacture of whisky and brandy in the United States, the use of these drugs for medicinal purposes must ultimately cease, except as they may be imported. The difficulties in the way of regulating and controlling importations are so great as to render that method of supplying medicinal needs highly undesirable. Bills have been introduced in Congress looking toward the immediate beginning of the manufacture of whisky and brandy under strict government supervision, so as to have an adequate supply five years hence. Unless this legislation is enacted before March 4, it will go over until the next Congress, and the production of medicinal spirits will be postponed for at least a year. The continued use of medicinal spirits for the treatment of the sick seems to depend, therefore, on the immediate enactment of the legislation now proposed. Those who

desire the enactment of this legislation may promote such action by telegrams to their senators and representatives.—*Jour. A. M. A.*, Feb. 19, 1927.

#### RESEARCH ON SURGICAL SUPPLIES

According to Dr. E. R. Weidlein, director, Mellon Institute of Industrial Research, University of Pittsburgh, the firm of Johnson & Johnson, manufacturer of surgical supplies, New Brunswick, N. J., has established at the Institute a fellowship that will study the exact requirements of surgeons and other medical specialists in the way of sundries, with the joint aim of developing new supplies that are needed and of standardizing the products now in use. An investigation will also be made of the processes of renovating used supplies, and several other Industrial Fellowships of the Institute will cooperate in devising satisfactory procedures.

Dr. Frederic H. Slayton (M. D., Rush Medical College) will be in direct charge of this comprehensive research. The Fellowship will be operated in a totally unbiased and independent manner, in accordance with the Mellon Institute system, and all its investigations will be conducted primarily for the benefit of the public. It is the plan to report the results in appropriate periodicals as the various phases of the studies are concluded.

In carrying on this work, Dr. Slayton and the Institute's executive staff invite the concurrence of all interested organizations. They are especially desirous of securing the close collaboration of hospital executives and of members of the medical profession.

#### GLORIFYING THE AMERICAN GIRL

Florenz Ziegfeld, who continues "glorifying the American girl," but insists that she be "modestly dressed" says, "the plumper girl is coming in." He predicts disappearance of the prevailing type that looks half starved as a result of dieting.

That's good news, for the tired businessman who sits in front. Still better news for the other man who wants the next generation to be worth while, and fears trouble when the half starved babies of half starved mothers grow up and take hold of the nation.—*Arthur Brisbane, Current Press.*

#### WHICH EXPLAINS IT

Professor: "James, why were you absent yesterday?"

James: "My grandmother died."

Professor: "What? Why, this is the third time your grandmother has died."

James: "Yes, sir, but my father was a Mormon."

#### AS VIEWED BY A FUNDAMENTALIST

"Did you see my black-faced antelope?" inquired the menagerist.

"With whom did your black-faced aunt elope?" countered the Fundamentalist.—Brown Jug.



## Original Articles

### OBSERVATIONS ON DISEASES OF THE BILIARY TRACTS.\*

JULIUS BRAMS, M. D.

Roentgenologist, St. Elizabeth's Hospital

KARL A. MEYER, M. D.

Attending Surgeon, Cook County Hospital

WILLIAM A. BRAMS, M. D.

Attending Physician, Cook County Hospital

CHICAGO.

The clinical manifestations in atypical cases of cholelithiasis are so vague in many instances that the recognition of this condition is often very difficult or impossible. For this reason we have undertaken a study of a series of 100 anatomically proved cases of gall stones in order to determine any clinical data which may be of value in diagnosis and in connection with this study we have also included a survey of our experience with 250 cases of gall bladder disease in which cholecystography was employed as an aid in recognizing pathologic conditions of the gall bladder.

Before reporting our experiences with cholecystography we wish to discuss several other clinical features observed by us in our study of our series of consecutive cases of cholelithiasis. The first feature to attract our attention was the incidence of gall stones in the two sexes. In accordance with the accepted statements that cholelithiasis occurs from two to four times as often in women as in men we found that this condition occurred 77 times in females and 23 times in males. This observation is of value in considering the differential diagnosis and the relative probabilities of the various causes for distress in the upper abdomen in the two sexes. It is difficult to explain the greater incidence of gall stones in women but pregnancy is certainly an important factor according to many observers and our own experience tends to confirm this view, although we are unable to furnish definite statistics on this point.

A study of the ages at which cholelithiasis occurred in our series showed that 19 were between the ages of 20 to 30, 30 between 30 and 40 and 51 between 40 and 70. These statistics correspond with those generally given showing

that this condition occurs frequently in middle or past middle age but our study also shows that cholelithiasis is more common at an earlier age, especially in females, than is frequently supposed.

A study of the clinical manifestations revealed several interesting features. The onset was sudden in 72 cases and gradual in 28 instances. The most important symptom was pain, of which all varieties were present from a mere oppression to severe colicky pain. The pain was located in the right upper quadrant in 73 cases, in the epigastrium in 22 and elsewhere in the abdomen in 5 cases. The location of the tenderness was a more trustworthy guide to the offending organ than the pain. This sign was present in the right upper quadrant in 82 cases, in the epigastrium in 9, and in other regions of the abdomen in 9 instances.

A symptom which appeared of importance to us was vomiting and especially the appearance of the vomitus. Vomiting occurred in 74 instances and in 46 cases the vomitus was fluid and dark green or yellowish in color resembling bile. This bile stained vomitus has been of value to us in the differentiation of the less typical cases of gall stone disease from gastric ulcer. The vomitus in the latter is not often so bile stained and frequently contains food particles while the vomitus in gall stones is more likely to consist of fluid which is bile stained and food particles are seldom present.

Another frequent symptom observed by us was constipation which was present in 46 cases. We cannot detect any definitely direct connection between gall stones and constipation, but we have repeatedly observed a spasmodic condition of the sigmoid on x-ray examination. This reflex contraction of the terminal part of the large bowel may be an important factor in the production of the constipation, but future study must show the actual mechanism and if constipation disappears after surgical treatment of the gall bladder.

Jaundice, a sign of great value, was present in only 51 instances and again emphasizes the fact that it is a most valuable sign when present but that its absence in no way speaks against pathology in the biliary tract. The occurrence of chills, fever and sweats was not as common as we at first supposed, as only 58 patients stated

\*Read before the Section on Surgery, Illinois State Medical Society, Champaign, May 18, 1926.

that they had observed these phenomena. Leucocytosis was present in 39 cases.

The most valuable diagnostic procedure from the laboratory standpoint was x-ray according to the method of Graham and Cole, when these workers introduced their method for visualization of the gall bladder. In the brief period since this method has been at our disposal, reports from various clinics have accumulated to the extent of thousands of cases. All of the authors are agreed upon the fact that at no time were they able to make definite diagnoses as often and with the degree of accuracy now possible. The most skeptical agree that a tremendous amount of information can be obtained by the use of the dye method and even George, who is of the opinion that the older method, popularized by himself, is the only independent one at the present time, agrees that this older method may be supplemented by the Graham Cole procedure.

In a previous paper we reported a series of 100 cases in which we used a specially prepared form of sodium tetraiodophenolphthalein for oral administration with which we had excellent results. Since that time the trend has been to give the drug intravenously and with the manufacture of a purer form of the drug and improvement of technique, the undesirable reactions which sometimes follow this method have been reduced to a negligible minimum. Similarly the number of unpleasant reactions following the oral administration have been reduced and, although we agree that the intravenous procedure is more accurate we have had such good success with the oral method that we have continued its use in all our cases.

In our routine gall bladder examinations we have adopted a plan which combine both the direct visualization of the gall bladder as advocated by George and the dye method as introduced by Graham and Cole. We believe that each method has its advantages and that by a combination of the two we obtain the most information. The following technique is carried out as far as possible. The patient reports in the morning after having had a cleaning enema and a series of gall bladder films are made for the purpose of visualizing gall stones or a gall bladder shadow. The pills, each containing 5 grains of the dye, are taken in the evening and we give one pill for each 12 pounds body weight. Four pills are taken every hour until all are ingested and

the patient eats no breakfast next morning. The films are made about 14 hours after the last pills are taken.

The preliminary films give us considerable information, especially if there are stones of sufficient calcium content to cast a shadow. We always check up on shadows of the gall bladder when present as we have had the experience that a shadow which was considered a gall bladder shadow turned out to be something else when re-examined by cholecystography. The examination of the stomach with the opaque meal which we carry out after the cholecystograms are taken gives additional information and indirect evidence of gall bladder disease. If we can demonstrate duodenal fixation, spasm of the duodenum or surging of this organ or a gall bladder seat we feel that we have obtained valuable information. Very often pathology of the stomach or duodenum may be discovered when the gall bladder has no pathology. The exact value of all of these indirect signs as well as of a shadow without the dye has diminished since we have checked up with a cholecystogram as we have found that the gall bladder may be at quite some distance from the shadow seen on the plain film and that the gall bladder seat may be far from the gall bladder itself. In spite of this we feel that the information obtained is worth while and we employ the plain film and contrast meal in addition to regular cholecystography in our routine work.

A study of the films after the use of the dye gives information of great value. A normal cholecystogram has certain definite characteristics which depend on certain definite factors. It is assumed that the dye after absorption is excreted almost entirely by the liver into the bile. The bile, reaching the gall bladder on a fasting stomach remains in the gall bladder and is concentrated if the mucosa is functioning normally. This concentration reaches its maximum in 12 to 14 hours, so that a shadow of the gall bladder may be seen if the films are taken at this time. Several factors are necessary for the gall bladder to cast a shadow under these conditions. The liver function must be good enough to excrete sufficient of the dye into the bile but we have met only one instance in which the failure to cast a shadow of the gall bladder could be ascribed to this cause. Next, the hepatic and cystic ducts must be patent for the dye to enter the gall bladder. The concentrating power of



the gall bladder must be normal and this is of the greatest importance as this function is destroyed in disease of the gall bladder and no shadow is obtained. Normally a beautiful shadow is obtained of the gall bladder and absence of such a shadow is evidence that there is disease of the gall bladder or the passages are blocked.

Other valuable points are the density of the shadow, its outline, size, shape and position. We assume the normal density to be that of the neighboring ribs. In addition to noting the density it must be borne in mind that the shadow must be homogeneous. The outline is normally smooth and regular and presents no irregularities. Pressure from the liver or bowel often indents the gall bladder and this should not be mistaken for an irregularity due to pathological causes. As to size, shape and position, the variations are so great that it would be futile to describe them here. We have seen gall bladders which have barely emerged from the liver margin and we again have seen them extending to the fourth lumbar vertebra. In shape they may be pyriform, pedunculated, thumb shaped or almost round. In position the gall bladder may be almost anywhere in the right half of the abdomen.

The picture of the abnormal is dependent on the underlying pathology. The simplest form of abnormality is that caused by adhesions. This is manifested by a sharp constriction across the shadow, usually noted on both sides and commonly multiple. If the adhesions are at the fundus the shadow appears drawn down and irregular instead of smooth and round. Films with the stomach containing barium at times give some interesting data relative to adhesions between the duodenum and gall bladder. Chronic cholecystitis is characterized by the absence of a gall bladder shadow or by the presence of one that is faint instead of a shadow of normal density. Borderline cases may present considerable difficulty in deciding whether the density indicates normal or abnormal function, but the evidence obtained by further study of the cholecystogram and a consideration of the indirect signs will almost always enable one to reach a definite conclusion.

Cholesterol stones or those containing too small an amount of calcium to cast a shadow are demonstrated as negative shadows within the dye filled gall bladder. If large, the outline of the

stones are distinct, if small and numerous the density of the gall bladder has a mottled appearance. Gas in the bowel overlying the gall bladder and other extrinsic shadows should not be mistaken for stones. Very often soft stones will be demonstrated after the use of the dye as a result of imbibing some of it, thus making their surfaces opaque to the x-ray and casting a ring like the shadow on the film.

We have up to the present time examined 250 cases by this method of which 102 have been operated on, and of these latter 102 cases 93 were found to have been diagnosed correctly. The cases not operated upon corresponded with the clinical diagnosis in about 90%. To those who have not had the opportunity of using this method in a large number of cases our results may seem to be unusually good, yet they represent only the average reported by other observers. Graham has recently pointed out that since the introduction of cholecystography the diagnoses are correct in about 90% of collected cases numbering several thousand observations.

Certain factors may sometimes be encountered which may give poor results. This may be avoided by using only fresh pills and by giving the patient printed instructions which he must carry out to the letter. Failure of the pills to dissolve seems to be unimportant. On a large film we can count the number of undissolved pills and often three or four will be seen, but our experience has been that even in these instances good cholecystograms may be obtained. This is explained by the fact that the dose as mentioned is about a third too great but is given purposely to compensate for some failure of absorption. Failure of the dye to be absorbed does not seem to be an important consideration as in practically all instances in which the dye can be seen in the colon enough will be absorbed to produce a cholecystogram except in cases of severe diarrhea where the dye is not retained long enough in the bowel for sufficient absorption. It has recently been pointed out that the gall bladder can empty itself to a psychic stimulus when the stomach is empty and when the individual is allowed to smell the odor of food, especially if the food appeals to the patient. The importance of this is obvious and measures should be taken to prevent such an occurrence before a cholecystogram is taken.

One hears very little now about reactions either

from the intravenous or the oral administration of this dye. This is in a large measure due to the manufacture of a much purer form of the dye. No bad effects have been reported and in our series nausea and vomiting was present in about 20% of the cases, but these symptoms soon disappeared. No patient had what could be termed a severe reaction and all felt perfectly well in 24 hours. The urine was examined in a large number of patients, but no evidence of damage could be found. Investigation of patients in whom reactions were noted showed that more than half of them were more or less acutely ill and jaundiced before they took the dye. Another important point is to impress the patients to take the pills whole as an intact coating of the pills will seldom lead to reactions, but if the coating is cracked or chewed a reaction will occur. If we consider the entire group we can say that the reactions encountered were comparatively mild and transient and certainly the information obtained far outweighs the slight discomfort that may possibly befall the patient.

#### DISCUSSION

Dr. W. F. Grinstead, Cairo: Until very recently I have practically excluded x-ray service from my gallbladder cases. There is a reason and I think a good one. Ordinarily the clinical signs of gall-stone disease and infected gall-bladders are quite apparent. The best way to become expert in diagnosing gall-bladder disease is to have it yourself. You get an element of self introduced so that you are a pretty good diagnostician for cholecystitis. My experience in having gall-bladder cases x-rayed where the clinical signs were very clear was that when the skiagrams failed to show any stone in the gall-bladder, the patients thought I was mistaken and they would not accept the only remedy for their relief. The radiologists are telling us that they can only show gall-stones in about 50 per cent of their cases. Therefore we have a skiagram which we might show the patient that did not give us any gall-stone shadows and we still have the problem of diagnosis and I still advise my patients to have surgical treatment on the clinical signs. The radiologists really get in my way.

My x-ray assistant is using this method that the essayist has shown us in such an interesting way. I believe that hereafter we will find a very great help by this method and I say that in my own little clinic in Cairo, I believe it is going to become popular.

When a patient comes in whom the diagnostician has not seen before with a history of indigestion for which nothing does any good, running back two or three years, sometimes longer, the experienced man will think of an infected gall-bladder and he will begin to trace up the history of the case which is very valuable. In that history if he finds colics which

are the most important symptoms of gall-bladder disease, he has a very good clew. Sometimes my medical friends have said to me: "I thought about gall-bladder disease but the patient was never jaundiced," but the fact of the matter is that patients with gall-bladder disease do not have jaundice unless there are complications. If the infection does not extend into the ducts you do not have jaundice. If stone or infection gets into the ducts, then you get jaundice. I always bring that point out when this question comes up in consultation. My greatest help in the diagnosis of cholecystitis has been the history. I go back to the first symptom the patient had and trace it down carefully to the present time. It is surprising how often one can actually make a diagnosis from the history.

I am going to read this paper when it comes out in the JOURNAL. I am going to call my associates' attention to it and see if we can get some help from it.

Dr. D. N. Eisendrath, Chicago: This is a distinct contribution to diagnostic resources. The pictures which Dr. Brams showed are of great help. I have been very much interested in what Dr. Furey and also Dr. Brams said regarding the differentiation between a shadow that is due to a kidney stone and that due to gall-stones. We recently had a case which showed a shadow directly over the kidney area. The patient at that time would not permit of the method which I believe is the surest of all to differentiate between kidney and gall-stone. I think if Dr. Furey had employed it, it would not have been necessary to open the abdomen. It is this, if you do a pyelography on a questionable case, using 12.5 per cent. sodium iodid, it will invariably give you a shadow of stone. If it is a calcified gland, it will show a shadow away from the kidney.

We recently had a case in which it was necessary to abandon pyelography, because the patient had been cystoscoped so it was necessary to use some other method to differentiate between gall-stone and renal-stone. We used cholecystography. It was interesting to note that the shadow was completely overlapped by the shadow of the gall-bladder and gave a second shadow of what turned out to be a kidney stone, projected out a little bit from the kidney and it was not until we took a lateral picture, to which Dr. Brams did not refer, were we able to separate the shadow of the kidney stone from that of the gall-bladder.

Dr. Warren W. Furey, Chicago: I was very much impressed with the Doctor's paper and I want to congratulate him on the thoroughness of it. There is one thing I am sorry Doctor did not do. He did not go into detail on the technic employed in the taking of his films. I find that taking the cholecystograms in 12, 16 and 36 hours we get the best results. The Doctor says that a pathological gall-bladder does not show. I am inclined to disagree with him in that one point. The shadow will show practically normal in 12 hours but sometimes the gall-bladder will not empty in 36 hours. I have had two or three cases that have been operated on where the shadow was



still present in 36 hours. Laboratory reports showed these to be pathological gall-bladders.

One other point; the Doctor said it is a good means of differentiating between cholelithiasis and renal lithiasis. I had a case the other day in which a diagnosis of renal lithiasis was made. We had cholecystograms taken and a diagnosis of cholelithiasis was made. At operation the patient had neither. There was a small calcified gland at the neck of the gall-bladder which gave the same shadow as a stone would.

Regarding the oral method I am inclined to agree with the Doctor. The results are about the same as with the intravenous method though in some doubtful cases I check up the oral administration with the intravenous.

Dr. O. E. Nadeau, Chicago: As long as the subject has come up about differentiating between kidney and gall-stones, I might refer to such a case. There was the shadow of a stone in the region of the gall-bladder or kidney discovered accidentally by x-ray without symptoms relative to either organ. In order to eliminate kidney stone, we made a pyelogram and the stone was included in the pyelogram. That did not tell us anything. Then we made a cholecystogram and the stone shadow was found included within the gall-bladder shadow. Then we tried lateral pictures, but the shadow was seen apparently between both organs.

At operation the stone was found in the cortex of the kidney between the gall-bladder and the kidney neither in the pelvis of the kidney nor in the gall bladder. It apparently was a tuberculous abscess that had calcified.

Dr. Bertha Van Hoosen: I would like to ask the Doctor if he has done anything in acute cholecystitis, especially where it might complicate pregnancy and if he mentioned in his paper the exact proportion of the material that he used.

Dr. Edmund Andrews: I would like to know if Dr. Brams would think we are justified in giving the dye intravenously after getting negative findings following the ingestion of the dye. I have had cases where the patient swallowed the dye and were made ill and would not take it again.

Dr. William A. Brams, Chicago (closing): In my paper, I attempted to cover as much as I could and necessarily left out a good many details which should have been taken up.

We take exposures at various intervals until we get a good shadow. A gall-bladder which does fill well and is delayed in emptying beyond the normal period of two to five hours is probably pathologic. Dr. Furey is right. The patient he described as having a calcified gland is a condition to be considered. Those things will come with experience. Whether the method Dr. Eisendrath suggests will prove the method of choice will remain for the future to decide. We have not used the lateral method as Dr. Eisendrath described—that is, turning the patient on the side.

In reply to Dr. Van Hoosen, we have not had any very acute cases complicated by pregnancy.

As to the technic, the patient at night takes four

pills every half hour (1 pill to every 12 pounds of body weight), after a light supper and after that no food is allowed but copious amounts of water are given. The patient is instructed to lie in bed on the right side that night. No breakfast is given in the morning and the usual x-ray technic is followed fourteen hours after the last pill is taken.

Nausea and vomiting occurred in a few instances. Unlike the test for liver function, we have had no case where death has occurred. If a patient is deeply jaundiced and has nausea and vomiting, it may exaggerate the symptoms.

In reply to Dr. Andrews, we like to confirm our results by the intravenous method, if they are questionable. We know that the intravenous method is more dangerous than where the dye is given by mouth. In doubtful cases where the diagnosis is uncertain, we would not hesitate to use it.

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## COMMUNITY RESPONSIBILITY FOR HEALTH EDUCATION\*

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WASHINGTON, D. C.

This joint meeting of the medical and dental professions of Chicago exemplifies the close relationship which should exist between medicine and dentistry. In this age of increasing specialization it is well to bear in mind the essential unity which exists between all branches of medicine. Dentistry very properly should be considered as a branch of the medical profession. The trend to specialism, which is perhaps necessary under modern conditions in medicine, should not obscure the fact that the human organism is a single biological unit and every person dealing with any part or function of the human body should keep constantly in mind the relation of that part or of that function to the organism as a whole.

Of the many examples available, only one will be cited to illustrate the point I wish to emphasize. Dental hygiene seeks to secure and preserve for the individual a normal dentition. It is rare for the dentist to be consulted until the child is at least several years old. At this age it is probable that the inherent quality of the teeth is largely predetermined. The present meager information available in this field indicates that the quality of a child's teeth is determined by the general health, and particularly by the nutrition, of the mother during (and

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\*Read before a joint meeting of the Chicago Medical and Dental Societies, January 26, 1927.

possibly before) pregnancy, and by the nutrition of the infant and young child before the teeth have erupted. Thus it is seen that dental hygiene has its starting point in nutrition and in prenatal and infant care, and that the best efforts of the dentist will be limited by the inherent quality of tooth structure with which that child is endowed.

It would be inappropriate for me to dwell further upon the essential unity of all branches of modern medicine, and I have referred to it only because the same subject needs even more to be emphasized in its application to the relation between preventive and curative medicine.

It has often been stated that the field of public health endeavor embraces the problems of prevention and the field of the private practitioner those of cure, but in actual practice no such simple division of effort is possible. The lines of demarcation between prevention and cure are in many instances indistinguishable and the trend of the present is towards further obliteration of these landmarks.

A brief consideration of the evolution of medicine during the past half century will reveal very clearly the reason for the present uncertainty as to the scope of organized public health effort, and perhaps will serve to point out the future trends of medical science and practice.

Although the prevention of disease has been the aim of medical science since the time of Hippocrates, this has been a promise rather than a fulfillment until the discoveries in the latter half of the nineteenth century paved the way for the realization of this primary aim of medicine. When the history of our age has been written it will contain no more brilliant a page than that on which is reported the progress of medical science in the prevention of disease.

Thus far the greatest accomplishments in public health have been those related to the eradication of the diseases spread by unhealthful conditions in the environment. Almost equally striking has been the progress made in eradicating those diseases for which specific methods of prevention or cure have been discovered. The difference between these two groups of diseases lies in the fact that it is comparatively easy to safeguard a community against the diseases spread by environmental insanitation. It is comparatively easy to reduce typhoid fever prev-

alence to a minimum. In this city, for example, the chlorination of the water supply brought about a tremendous reduction, and pasteurization of the milk supply caused a still further decline in the typhoid fever rate. Both of these measures could be adopted and put into force by the governing authorities without any active participation on the part of a great mass of the citizens, and with no change in the habits and daily life of the individual. The same principle applies to the control of yellow fever and of malaria.

The prevention of diphtheria, however, or of scarlet fever, is entirely a different problem. In each of these cases it is necessary to secure the active participation of the individual citizen in the community in any successful program of prevention. There is also a great group of diseases, among which the following are important examples—cancer, tuberculosis, syphilis and gonorrhea—in which the participation of the individual citizen is necessary to the success of any efforts to reduce their prevalence. This statement is equally true in its application to the problems of prenatal and infant care, or of school hygiene. It applies likewise to that great group of degenerative diseases and to the focal infections. Not only is public health concerned with the prevention of disease, but of equal importance is the promotion of health by improving physical and mental fitness. Not only to live, but to live in the full enjoyment of life is the aim of preventive medicine. It is obvious that the most intimate cooperation of the individual citizen is necessary to accomplish such an aim and health education assumes, therefore, an increasingly important aspect.

On every hand are to be seen the results of the lack of an adequate medical service. This is true throughout the whole life span. Only a small proportion of pregnant women are under medical care throughout their pregnancy, and as a result child bearing is more hazardous than it needs to be. In infancy, too few babies are constantly under professional care for hygienic guidance, with the result that infant mortality although declining, is still much too high. In that neglected preschool age, too little medical care is furnished, and the number of serious defects among school children testifies to the need for preventive medical care in this age



group. It is well known that a small percentage of the acute contagions of childhood are seen by physicians, and deaths from measles and whooping-cough, for example, call attention to this fact.

In young adult life the venereal diseases are the most common of the infections. Here, too, hope of prevention lies in early, adequate and persistent treatment, which is not now furnished to the great mass of cases. Tuberculosis in early adult life, cancer, and the heart-artery-kidney syndrome in later life, all are further examples of public health problems in the solution of which early recognition of the condition and prompt and adequate medical treatment are necessary.

In the case of many of the diseases which are major health problems, the cure of a case of the disease is the best means offered of preventing further cases, or the prompt recognition (early diagnosis) and early and adequate treatment of a disease is the most effective method of preventing the development of more serious results. In other words, one of the most basic of the problems in public health today is that of furnishing to the people a more complete medical service, of furnishing this service earlier in the course of disease, and of furnishing a better type of medical service, particularly to the great mass of the people of small means. The problems of prevention and the problems of treatment, then, are to a great extent indistinguishable and in their solution all branches of medicine, dentistry and the allied sciences must unite in a common endeavor if a satisfactory measure of success is to attend their efforts.

In order to bring to the individual more complete benefits of medical science, the service of the physician and dentist must be more largely a preventive service. This involves a great change in methods of medical practice. It goes back further and involves a change in medical teaching. The medical curriculum will need to lay more stress upon the practical application of the practice of prevention as applied to the community and as applied to the individual aspects of disease. The training of medical students must be more largely in detecting slight errors in normal function, in looking for minor deviations from the normal in the operation of the human mechanism. The physician must become

the hygienic advisor of his patients, and in the course of his daily work he must emphasize to the patient the necessity for continuous hygienic supervision and the importance of seeking a physician on the first sign of illness.

The idea of a periodic physical examination of apparently normal persons has been gradually growing, although it has not met with an enthusiastic response on the part of the public or the profession. This is perhaps because the examination has been considered as an end in itself—a result to be sought—whereas, as a matter of fact, it is only a means to an end. The end result which should be sought is earlier recognition of disease, the detection of impaired function in the human organism, the recognition of slight deviations from normal, while the pathology is still in an incipient stage. This involves a different attitude on the part of the average physician. Heretofore physicians and dentists have been largely engaged in treating the end results of gross pathology, have been concerned with the salvage of human wreckage, and have not interested themselves sufficiently in the slight errors in normal function of body or mind. The dentists have progressed further than the physicians in conveying to the public the importance of preventive dental care, but it is stated that even in this profession 90 per cent. of the work of its members deals with reparative treatment rather than with preventive treatment.

Under our very eyes the science of medicine is undergoing an evolution such as has not heretofore occurred in the history of the world. The problems of yesterday are not the problems of today, and the methods of the past often are not applicable to present tasks. One of the most significant changes which has occurred in medicine is the tremendous and increasing interest of the public in the facts of health and disease. Medical science is no longer a subject of professional mystery—a new scientific fact today becomes the topic of public conversation tomorrow. The public is insistent in its search for knowledge which has a bearing upon the problems of individual and community health, and it is of immediate concern to the medical profession how this knowledge is to be imparted to the public.

The fact must be faced that in spite of the

receptivity of the public of medical knowledge, the practical application of the scientific facts of medicine has not kept pace with the increased knowledge of this science. In the larger cities of the country public health effort is more nearly commensurate with existing needs than is the case with the rural districts and small towns, and the gratifying increase in longevity which has occurred during this century has been due almost entirely to the better health record of the cities. Chicago, in particular, is to be congratulated upon the progress it has made in the conservation of human health. The typhoid fever death rate, the infant mortality rate, the record as regards other preventable diseases and the general death rate, all bespeak an efficient organization of the community and individual forces of prevention. This result could not be secured and cannot be maintained unless the instruction of the public in health matters keeps pace with the development of the science. The community's responsibility for health education is synonymous with the community's responsibility for health conservation, because the education and information of the public must precede the application of any active measures for health conservation.

Any program of health conservation must recognize both the public or community aspect and the private or individual aspect of hygiene. There are certain health problems, too well known to be enumerated here, which must of necessity be met by organized community effort through its health department. Other health problems can be met only by action on the part of the individual. The medical and dental professions should interest themselves in developing and guiding community thought and action no less than that of the individual in regard to all phases of hygiene.

The first object towards which health education in any community should be directed is the provision of a well organized health department with properly trained personnel. This is fundamental to any advance in preventive medicine. Studies by the Public Health Service have shown that of the 815 cities in the United States of more than 10,000 population, only 352 have full time medical health officers. In Illinois the proportion is much lower than the general average. In the rural districts of the United States only

15 per cent. of the population has a health service which even approaches adequacy.

Once the first step has been taken by a community and the health department placed on an efficient basis, the sequence in which the various health problems are met will vary with local conditions and needs.

In every community, however, there exists the general need which I have mentioned already at some length, viz., a more adequate medical service for the individual, particularly the individual of small means, a medical service which will be more preventive in character and which will be utilized more fully by the people.

By education of the individual to desire and to secure the services of the physician and dentist to keep him well no less than to cure him when he is sick, and by education of the profession to furnish this service, much can be accomplished, but there still remains an important economic consideration for the great mass of people of small means. This is particularly true as regards hospital care. Our system of hospital organization seems to leave out of consideration all except the very rich and the very poor. Although the hospital beds per capita are less in this country than in a number of others of which I have information, our hospital beds are on the average only 67 per cent. occupied, according to information published by the American Medical Association. High cost, uneven distribution and specialization of hospitals probably accounts for this condition. In any event, communities should provide adequate hospitals for the care of the sick, where treatment may be had at a cost within the ability of the patient to pay.

In a recent address I called attention to the need which exists for the better organization of the forces of preventive and curative medicine, and for their more complete application to the service of humanity. The newspapers misquoted me as advocating state medicine. I am not an advocate of state medicine, and this same attitude is held by the great majority of public health officials of the country. I am convinced, however, that the facts of medical science are not being applied as fully as they should be for the prevention and for the preventive treatment of disease. I am likewise convinced that medicine as it is at present organized can remedy in great measure its present shortcomings. If.



however, medicine fails to adapt itself to changing needs, if it fails to interest itself constructively in the problems of preventive medicine, the public will seek other methods to provide itself with this service. State medicine in one form or another has been adopted by a number of countries. It will not make its appearance in this country if our present medical organization can anticipate and meet the needs for medical service as they arise. The first step is for all physicians as individuals and through their medical organizations to study the community aspects of medicine, and to interest themselves in leading the community towards a solution of its health problems. Thus I reach the inevitable conclusion that while health education is a community responsibility, the scientific leadership and guidance should be furnished by the medical and dental professions. In order to secure and to retain the confidence of the people, however, this leadership in health education must be constructive and must be dictated by the broadest humanitarian considerations.

Health departments and volunteer health agencies have long been active in the dissemination of health information. More recently medical and dental societies have undertaken extensive programs for the education of the public. The work which has been undertaken by the medical and dental societies of this State and City to educate the public in the facts of health and disease is a pioneer and highly praiseworthy effort, the success of which is being watched with interest throughout the country. Nothing could illustrate more vividly the splendid altruism which dominates the medical and dental professions than such movements as this. Fortunately, also, the practical results which should accrue will be of benefit not only to the public but to the professions as well.

Of special significance is the pioneer action of the State Dental Society in the employment of a dentist to work under the State Department of Health, to demonstrate to the people the necessity for dental hygiene as an integral part of community health effort. The action of the State Medical Society in favoring improvement in local health service in Illinois through full time medical officers for the counties is a timely recognition of a fundamental need. Another example of practical health education is the

activation of the interest of the public and the profession in the health of the preschool child, which is being brought about by the efforts of the medical profession in this State and City, with the cooperation of the health authorities and of other interested groups.

I have mentioned these examples of worthwhile health educational effort because they illustrate principles which are fundamental to success and which have a general application everywhere to the problems of health education. The program has been positive rather than negative. Definite needs have been recognized and practical methods of meeting these needs have been agreed upon and are being put into operation. Health education is accomplished by action rather than by conversation. The best method of education is through actual demonstration of practical procedures. These specific projects for health education have involved active participation and coordination of effort between various agencies interested in a common endeavor. Of particular importance is the practical teamwork which is being demonstrated between the medical and dental professions and the constituted health authorities, which is a fundamental consideration for success.

Finally, as a result of the participation of medical organizations in health education, it is inevitable that there will be an increased confidence on the part of the public in all that these organizations represent. Gentlemen, in the words of that wonderful tribute of Osler, "'Tis no idle challenge which we physicians throw out to the world when we claim that our mission is of the highest and of the noblest kind, not alone in curing disease but in educating the public in the laws of health, and in preventing the spread of plagues and pestilences, nor can it be gainsaid that of late years our record as a body has been more encouraging in practical results than those of the other learned professions. Not that we have lived up to the highest ideals—far from it—we are only men. But we have ideals, which means much, and they are realizable, which means more. Of course, there are Gehazis among us who serve for shekels, whose ears hear only the lowing of the oxen and the jingling of the guineas, but these are exceptions; the rank and file labor earnestly for the public good, and self-sacrificing devotion to its interests animates

our best work." Our meeting here illustrates our high purpose.

While crime and fraud are still rampant despite the efforts of our brother professions of law and legislation, while the race grows better so slowly through the ages despite our brothers of the cloth, with pride we can point to our accomplishments of recent years in our country. Yellow fever wiped out, the death rates from tuberculosis reduced forever, the means for eradicating smallpox and diphtheria revealed, the tortures of the operating room removed by anesthetics, and the seeming miracles of modern surgery and dentistry. The average age lengthened by several years, and life made broader, fuller, better.

But let us realize that "New occasions bring new duties, time makes ancient good uncouth." No longer can you who are practicing physicians and dentists fulfill your obligations by only treating the sick who come to you. We must through the press and our medical organizations impart the gospel of health, and using our high position and knowledge lead our communities to better conditions, and in doing so let us be frank, direct and clear.

Teach that the profession works "by wit and not by witchcraft," that there are diseases we still cannot prevent or cure, that we know our limitations while we are striving in laboratory, office, hospital and field to remove them.

Finally, in the language of the great Apostle, remember—"If the trumpet gives an uncertain sound who shall prepare himself for the battle? So yet, except ye utter by the tongue words easy to be understood, how shall it be known what is spoken? for ye shall speak into the air."

## ESOPHAGOSCOPY AND ASSOCIATED PROBLEMS\*

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In approaching endoscopic procedure as applies to the esophagus, we stand at the threshold of a varied, important, and as yet, almost a virgin field. Much has been achieved and written by the Masters, yet little has been done as routine work by the large majority of those whose special training equips them to undertake it. To me it

holds an unusual and appealing interest. My effort in writing this paper is to stimulate more thought and discussion upon the subject, and to hope that increased and better work shall be done. If, in any small measure, these things shall be accomplished—I am more than repaid for my effort.

The necessary clinical material for this work has been collected by Doctor Watson W. Gailey and the writer but we have been compelled to omit histories, slides, and exhibits of the time allotted.

Having been pupil, intern and post graduate student of Dr. Chevalier Jackson, and in his Bronchoscopic Clinic, it is with those fundamentals that this paper is written.

No organ in the body yields less readily to surgery than does the esophagus. This fact is due, both to its own intrinsic anatomy, and to its own peculiar location within the thorax. Esophagotomy is attended, not only by unfavorable after-results but by the gravest of surgical dangers and an alarming mortality. Thus some means of endoscopic procedure has been imperative, and the effort has been made for many years to acquire a satisfactory technique. In the great majority of cases endoscopy seems to offer the only avenue of approach. Each succeeding year finds many new branches of endoscopy dovetailing with the whole scheme of medical advancement.

Necessity demands esophagoscopy because the esophagus is the "sewer" of the mouth, being a hollow, thin walled "tube" with a low resistance to infection and a high bacterial content. The esophagus invites perforation by reason of its anatomy which includes four normal constructions. Yet esophagoscopy is a comparatively safe procedure with a low mortality, and when compared with esophagotomy, even when possible, is by far the safer and better method. A few of the critical conditions possible are: Ulceration, erosion, perforation, infection, mediastinitis, stenosis, diverticula, insufflation infections and dehydration.

The sources of clinical material are widespread. No community is without them. The foreign body case seems never to think "Safety First." Any object that can be swallowed is likely to be a foreign body. The infant sees an object, reaches for it, pushes it into the mouth, then swallows instinctively and is unable to tell later what took

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place. Cases of esophageal foreign body are seen by every practitioner of medicine—sometimes quite commonly. Yet it is to be feared that the condition is frequently overlooked. From such sources come the bulk of our clinical material, and the physician in general practice can be of great help in the handling and supervision of the case. Children are either too small to know better or are poorly supervised or educated along such lines.

Industrial workers hold tacks, nails or pins in the mouth letting the objects get too far back beyond the safety zone, and inhalation or swallowing often results.

In adults or old age, we often find a bolus of food lodged because of stenosis or spasm. False teeth, with a much lessened tactile sense, are often responsible for improper mastication, which results in lodgement at a constriction. If the patient is not in distress, we find that a twelve to twenty-four hour rest period aided by liberal doses of morphin and atrophine in magnesium sulphate solution (25%) often gives relaxation and passage of the bolus of food. Esophagoscopy can readily be done either for removal of the lodged substance or dilatation of the constricted area if indicated.

In tumor cases of the aged, malignancy, either in the esophagus or in the mediastinum must be considered. The mediastinal involvement may be either by extension of the process or contiguity of tissue.

Dental plates swallowed during anesthesia, fright or sleep are not an uncommon source of such trouble. Poisons, suicidally or accidentally taken, provide another group of individuals for this work.

In foods are to be found broken glass, pieces of wood, bones of all kinds and sizes, especially bones broken by a cleaver. A lodged foreign body gives a sensation of heaviness or weight opposite the point of lodgement. This is usually anteriorly.

Then there are to be found special pathological conditions which include ulceration due to an impacted foreign body, corrosives, foreign body, lodgement of long duration or conditions due to unsuccessful attempts at removal of a foreign body and those conditions tuberculous in etiology. We may find luetic lesions present. Another valuable lesson so ably brought out by Dr. Jackson is found in those cases of hematemesis

of esophageal origin so frequently diagnosed gastric hemorrhage. This blood may drain into the stomach before emesis, or may be due to pulmonary overflow into the esophagus or stomach.

Exploratory esophagoscopy is warranted if any one symptom is present, even in the face of negative x-ray findings, except in cases where contra-indications forbid it. Eight to ten days is a safe interval between esophagoscopies. All dysphagias deserve early exploratory esophagoscopy.

In spasm cases a rest period and sedatives with general treatment, may relieve the disturbance. If esophagoscopy be done the tissues may present a normal appearance.

Correct management of a case requiring endoscopic study demands thorough preparation. Hospitalization is the first step. Then a complete history, as that portion pertinent to foreign body may go back many years and be very important. A complete physical and laboratory examination is of great value because certain indications for or contra-indications to the work may thus be obtained. A direct mirror examination of the pharynx and larynx is absolutely necessary as it often reveals Jackson's sign of frothy material in the pyriform sinuses, indicative of stenosis. In adults, an examination with the naso-pharyngoscope may discover a post nasal foreign body. A blood Wassermann should be taken in all adult dysphagias. Regurgitation and vomiting must be differentiated, although vomiting is rare in foreign body cases. In children, if liquids pass but solids return, always think of a foreign body. In infants it is necessary to rule out pylorospasm or congenital hypertrophic stenosis. In dyspneic cases enlarged thymus should be considered and examined by x-ray and change of position. When food regurgitates it is imperative to stop all food or liquids by mouth in order to avoid "overflow" pneumonia. Infants lie on the abdomen (Grove) when suffering with a foreign body in the esophagus, probably to take the pressure of the trachea off the foreign body.

Localization and mechanical problems require the services of the roentgenologist who must be given full sway. His opinion is invaluable. Remember that a flat foreign body in the esophagus presents its edges laterally because the esophagus is widest in its lateral dimension. The exact opposite is true of the trachea. Preliminary fluoroscopy may give much help. A bismuth filled No. 00 capsule x-rayed or fluoroscoped, both

before and after dissolving, will, by its lodgement and coating of the foreign body, be of much diagnostic value in reaching a conclusion, especially if the foreign body is non-opaque to x-ray.

Certain medicinal agents are serviceable. It is an excellent plan to alkalinize the patient if time permits. Body fluids can be replenished by mouth, rectal absorption, intravenous administration or continuous hypodermoclysis. The Murphy drip of soda bicarbonate and glucose is excellent therapy. In cases of extreme dehydration it is well to perform a high gastrostomy and then supply the drip solution direct to the gastrostomy tube as much larger amounts can be absorbed from the stomach. Esophagoscopy can be done later when the general condition permits. In all foreign body cases where sharp points are not imbedded in the mucous membrane, we have found frequent, small amounts of liquid petrolatum of value as a lubricant to help keep a foreign body from becoming lodged. For the relief of esophageal discomfort it is essential to give a powder or tablet consisting of Acetylsalicylate grains iiiss, Asephenetidin grains iiiss, and caffeine grains ss, dissolved in a small amount of water if possible.

Surgical antisepsis must be adhered to as in all operative procedures. For the patient a cold Na Cl mouth wash and distilled water only if possible. Also we routinely use a non-irritating neutral aniline dye in small amounts every two hours by mouth with good results. To empty the esophagus of food particles, give a drink of water, then lower the head, and induce regurgitation.

Before actually beginning the procedure, choose the instruments most adaptable, testing out all mechanical parts, after having practiced on a duplicate foreign body if possible. One must be ready for any emergency that may arise. Remember that the contraindications are often of greater importance than the indications. Just before admittance to the operating room, verification of the position of the foreign body should be made by the fluoroscope or x-ray. The anesthetic of choice in our work with children has been ether unless contraindicated by dyspnea. No narcotic is required. We use the Jackson modified Boyce position keeping the shoulders on the table with the head flexed, elevated and extended. For a satisfactory mouth opening, we have found the Moore bite block to be of excellent service.

In the identification of landmarks the right pyriform sinus is easier. This gives the correct general direction toward the left anterior superior spine of the ilium. The teeth and right pyriform sinus lips must be watched for trauma. Introduction of the esophagoscope must be by direct vision. After the right pyriform sinus is passed we have found that a rotary progression and regression aids in smooth passage. This irons out the folds which must be explored, noting narrowings, anatomical and pathological. The color of the mucosa is an important consideration in pathology of the esophagus. Suction and sponging will keep the esophagus clear of debris. Due to the vapor which is exhaled we have found it better not to give ether by side chain as it is irritating to the eyes of the operator. The crico-pharyngeus is prone to spasm and must be so considered. Proper direction and pressure will avoid embarrassment of respiration by tracheal crowding.

Reaching the level of involvement of the foreign body, its kind, presentation, mechanics and surgical aspect must be observed. The location of sharp points is most important. In stenosis ascertain their number, extent, if concentric or eccentric, and the color of the surrounding tissue. If tumor be present, whether within or without the esophagus, whether obstructive or not, and if possible take tissue for biopsy—remembering that a very minute piece of tissue is sufficient for diagnosis. In case of ulcer note the kind, location, size and whether obstructive or not. Also note the level in centimeters from the superior incisor teeth. When undertaking removal of the foreign body, never use force or haste as a substitute for skill. It is better to leave a foreign body than to perforate an esophagus. There is always time to keep within the limits of safety and good judgment. But time must be conserved; the hours spent in practice save minutes at operation. A complete armamentarium is absolutely essential. Under the same mechanical conditions what goes down can come up. A stop watch should be used for noting the time limits and the time recorded. When the foreign body is reached, gently free any grasping points until no mucous membrane is held in contact. Never grasp structures which cannot be clearly seen through the esophagoscope. This will prevent the forceps from tearing the tissues. Each foreign body removal must be



worked out according to the problems which it presents. Traction against the esophagoscope and holding the long axis of the foreign body parallel to the long axis of the pyriform sinus, often saves the temporary loss of a foreign body from the forceps.

Considering the post operative care of the patient it is well to force fluids, alkalize the patient, use a non-irritating neutral aniline dye by mouth and non-irritating soft diet after the first twenty-four hours. For forty-eight hours omit fruit juices and acids as they irritate the inflamed site of the foreign body. Complications are to be noted as usual by the physical signs and the temperature chart. An x-ray of bismuth often is helpful in noting post operative stenosis or extension due to tearing. If there are no complications general diet is given as soon as possible—the sooner the better.

Regarding the course of treatment in stenosis cases, it is better to dilate from above if possible. If not, do high gastrostomy, then retrograde bouginage using a No. 10 Tucker bougie and continuing upward to a No. 30 at intervals. Running bougies in a series of two or three at one bouginage, we have found helpful. This can be done, for example, by using a No. 18, No. 20 and No. 22 tied end to end. When a No. 18 is easily passed, No. 20 fairly easy and a No. 22 provides a good dilatation. This method is less uncomfortable than simply trying a No. 22. Never use force in these cases. We find that the sizes No. 16 and No. 18 require most repetition. By passing the string through the mouth, irritation of the inferior turbinate in children is avoided in those old enough not to bite it off. In case of a lost string it can be picked up through the gastrostomy opening. Another method is to give food, stand the patient on elbows and knees, and then request coughing. The string usually comes out through the gastrostomy opening.

Ulceration cases may require local applications and putting the esophagus at rest after removal of the cause. Systemic treatment in some conditions will, of course, be necessary.

Where tumors are present diagnose by appearance and verify by biopsy if possible. In conditions where a bolus of food has lodged previously, dilate the stenosis and improve the mastication of the food. For spasm, give rest period, sedatives if necessary and warm water in small

amounts as it is less likely to cause the disturbance.

When confronted with a moving foreign body it is safer to keep it going than to have it lodge or be forced up into the larynx or trachea. Avoid cathartics as they increase the danger of peristaltic perforation. As a lubricant aid, liquid petrolatum is excellent. Have the parents or nurses watch for the foreign body's passage by bowel. The stools must be strained. This becomes a great game for the parents. However, it is usually over in two to five days. The scratch on the esophageal wall may simulate a foreign body and be misleading, although symptoms leave in twenty-four to seventy-two hours as a rule. Jackson's sign when tracheal pressure produces pain opposite to the foreign body is valuable. Whenever a foreign body lodges below the stomach and is likely to produce a perforation the abdomen must be opened by the general surgeon.

During the after care of the patient, make frequent inspections to discover regurgitation, vomiting and any physical signs of complications. The gastrostomy wound may be closed when the scar is gone; when well masticated foods pass easily, and when a No. 30 Tucker bougie passes readily at intervals of several weeks. The diet of stenosis or spasm cases should be thoroughly masticated and soft foods, served warm—never hot or cold, at first giving warm liquids in small amounts.

In anticipation of stenosis it is best to begin early bouginage and dilatation while the opening is large and the general condition still favorable. Stenosis is much more likely in a foreign body case of long duration. Live cases often have slow, gradual stenoses which are acquired during many months or years.

Many and vital are the results to be obtained by esophagoscopy. The patient gets early relief of distressing symptoms; pain, dysphagia, regurgitation and dehydration. The prevention of complications comes through the supervision and education of children, teachers and parents, and by extreme care and team work at the time of operation. The avoidance of undue haste and force, combined with faithful practice, a complete preparation and study of the case, backed by the entire armamentarium of endoscopy offers the solution. In order to check advancing pathology it is necessary to give specific treatment as indicated, and to do gastrostomy before advanced

dehydration became manifest. Early dilatation and exploratory esophagoscopy are paramount. The value of systemic treatment must *not* be overlooked in these cases.

Most important of all, esophagoscopy saves or prolongs life, making useful citizens out of invalids in a manner not reached otherwise. One must know the limitations of each case to successfully cope with it and its associated problems.

Children require special precautions. At operation: A 7 mm esophagoscope and a tracheotomy set should be ready at hand. They must have education and supervision in the home as to the dangers of foreign bodies in the mouth. General precautions such as poisons labeled, kept out of reach, buttons sewed on tight, no loose pins and large playthings that cannot come apart leaving a small part to be swallowed.

From an anatomical standpoint, tracheal pressure must be watched, tissue damage by perforation must be avoided, infection lessened, a 10 mm esophagoscope used for adults, at the same time watching for food overflow. In a foreign body with points up, give a general diet to aid the movement downward.

The procedure of endoscopy will accept of no substitution either of instruments or operators; for only hours of practice can save valuable minutes at operation. Excellent practice is obtained by picking up various likely foreign bodies and working out problems with them. Except in emergency cases it is a wise plan to obtain some practice with a duplicate foreign body before operating. Thus complete equipment should always be at hand even if some of it may never be used. Recall also that liquid petrolatum and sedatives will aid both nature and operator in the solution of the foreign body problem. So also will good team work be of unquestioned value. Blind probing or bouginage is inexcusable. It must seem evident that every community deserves an endoscopic team as an agency in the saving of life; if, as is admitted, a pulmotor team is an accepted safety measure.

Undoubtedly a foreign body in the esophagus is less dangerous than one located in the trachea or larynx. However, esophageal endoscopy is a more difficult procedure than bronchoscopy. So also a moving foreign body may be more uncomfortable but is safer than a lodged one. Please recall that time alone never rules out a foreign body. A foreign body lodged within the esophagus

must be removed, and endoscopy is the answer. Recall again this cardinal fact, a lodged foreign body gives rise to a sensation of weight or heaviness within the chest, at a point anterior to its position. Although occasionally the sensation may be referred posteriorly it is never lateral in position. It is mistakes which exact the high toll of trauma and even of life in esophagoscopy. Bear in mind that both pre and post-operative alkalization are of cardinal importance.

Looking toward legislation the great State of Illinois has *no* Commercial Lye Legislation Act. *Lay Education* is the chief ground work of all prevention and this must begin by the profession through the homes and schools, as well as health campaigns. Until state or national legislation controls the sale and proper marking of all poisons such as lye, we will have hundreds of such inexcusable cases requiring our help.

The profession must continue and enlarge its education as to frequency, symptoms, procedure, advancements and follow-up care of endoscopic work to keep pace with advancing medicine.

For the future we will see the early diagnosis and removal of all esophageal foreign bodies, reducing complications to a minimum. Endoscopy will become an important part of the curriculum of every medical college and post graduate school in this country. Many more well trained endoscopic teams will protect communities in this kind of work. Endoscopy will continue to be a splendid, essential diagnostic factor in thoracic and upper abdominal diseases.

#### SUMMARY

In general summary let us consider these primary factors. The work is everywhere to be done. The harvest is ripe and plentiful. The workers pitifully few. There is a crying need for more, many more, trained men. Surely with conditions as they are, thousands of cases must go unrecognized. Let us also keep ever before us the paramount importance of preparing our patients well. The three vital factors, study, alkalization and x-ray, are the prime essentials. Neither can we stress too strongly the value of constant practice with every variety of foreign body under every possible circumstance. Adequate after-care must also be deemed of as great importance as the work which has preceded it. Time must and will provide sane and sensible legislation which will save many an innocent



little life. And, lastly, consider the almost miraculous results, the patient delivered from pain, suffering, and what in the end amounts to a lingering fatality.

If you will notice, literature on endoscopy is coming from all parts of the country which its merits warrant. Much constructive, controversial opinion will aid in bringing more men into active interest in this subject. If one looks only to the altruistic side of medicine he could *not* find a better field.

Again let us trust that those who hear and read may be awakened to a future keener interest which shall be rewarded with a monument of successful progress.

### DISCUSSION

Dr. C. F. Yerger, Chicago: Dr. Watkins' paper is one that covers a big field and covers it very well. He has undertaken to talk on various topics ordinarily included under endoscopy, and each topic in itself—laryngoscopy, bronchoscopy or esophagoscopy—would be in itself sufficient to consume quite a time in discussion.

This is a sort of bird's eye view of the subject, hitting the main points. To Dr. Chevalier Jackson, the profession owes a debt of gratitude for educating men in this special field. He deserves more credit than anyone in the world for this. I might also emphasize the importance of teamwork comprising the endoscopist with the internist and the surgeon. I believe that the same criticism holds here as in other parts of our specialty—the internist and the surgeon do not call on the specialist frequently enough in some of these borderline cases.

He brought out the point of the use of bougies. Any case that requires bougies should have the cooperation of the endoscopist and roentgenologist. The endoscopist should not attempt to remove a foreign body in any case in which it is possible to get a shadow in a picture until he has had the case x-rayed. The question of anesthesia is sometimes of great importance and much could be said about that alone. General anesthesia is as a rule to be side-stepped in these cases as much as possible, and following Dr. Jackson's teaching, one can get along most of the time without it.

Dr. James LeBensohn, Chicago: There is one type of impacted foreign body that can be treated medically—that is impacted food. I had a man who swallowed a piece of liver which was too large to be ingested and he had as a result considerable discomfort. An injection of apomorphine relieved him. Not long ago, I published this as an original contribution, but discovered later that it has been warmly recommended by a previous author in the 90's.

Dr. H. R. Watkins, Bloomington (closing): I want to thank you for the remarks you made on this paper. I spent a good deal of time with Jackson, and I know that the wish nearest his heart is to have a number

of young men all over the country protecting the communities. He says that then his mission would be fulfilled.

### SURGICAL TREATMENT OF CONGENITAL UMBILICAL HERNIA\*

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The facts that true congenital umbilical hernia is a clinical entity rather rarely seen, and that a congenital umbilical hernia containing several abdominal viscera is very uncommon makes us feel justified in reporting such a case and discussing its surgical treatment.

It must be remembered that umbilical herniae are divided etiologically into three types—congenital, infantile acquired and adult acquired. It is of the first type that we wish to speak. This first type, congenital umbilical hernia, is further divided into the very small protrusions, herniae into the cord, and the large herniae in which much of the abdominal contents may protrude into the cord several centimeters past the abdominal wall. In other words, they may vary from a small "umbilical button" the size of a finger tip to a tumor the size of a fetal head. It has been estimated that true congenital umbilical hernia probably occurs about once in 5,000 deliveries, and one containing intestine or other abdominal contents occurs once in about 10,000 cases, so it is not very likely that the average physician will see more than two such cases in a life time.

The etiology of congenital umbilical hernia differs from acquired umbilical hernia in that it is more common in males while the acquired is more common in females. Buschan and Lingfors collected 106 cases, 75 of which were males. The real cause of congenital hernia is some interference with the closure of the umbilical ring such as increased abdominal pressure, traction on the cord in utero due to its being too short or becoming entangled around the limbs, body or neck. Some cases have shown adhesions which seemed to hold a loop of intestine, a piece of omentum or a lobe of the liver out in the cord past the umbilical ring thus interfering with its closure. It then appears that, if in the embryological development of the fetus there is any mechanical interference with the develop-

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ment of the layers of the anterior abdominal wall as they close about the abdominal ring thereby gradually making this opening smaller, this alone is sufficient cause for the development of a hernia. This deformity, like many others is much more common in the premature infant. It is very often accompanied by other malformations or incomplete developments. Hertsfeld collected 16 cases of which 12 had associated with them: fissure of the palate four cases, fissure of the bladder five cases, pubic fissure three cases, spina bifida four cases, cerebral hernia one case. Among other deformities reported as accompanying umbilical hernia are included absence of the cranial vault, anencephaly, club-foot, hare-lip, spinal curvature, and hypospadias.

The diagnosis is usually very easy, if the person performing the delivery is aware of the fact that such a thing as congenital umbilical hernia, though rare, does exist and may occur in his practice, and that it is his duty to be on the lookout for this condition. The fact that the Wharton's jelly is transparent makes it possible in most cases to recognize the condition very readily by close inspection, and often renders it possible to even identify the various organs included in the hernia. The peritoneal sac and Wharton's jelly are usually the only coverings over the contents, the dark color of the liver or spleen usually revealing their presence, while in the unstrangulated cases it has been reported possible to observe the peristaltic action of the intestines. Every large cord should be carefully examined before clamping, especially if it seems to increase in diameter as it approaches the abdominal walls. Even where the cord is small, there is a slight bulging at the base which may contain a hernia. This ease of recognition, and the fact that the success of the treatment and the ultimate prognosis of the condition are so vitally aided or destroyed by the early recognition of the presence of a hernia makes it incumbent on us to make a plea for constant vigilance on the part of the obstetrician in looking carefully at every cord before it is clamped or ligated, as the unfortunate clamping or ligating of a cord containing a loop of intestine or a piece of liver is likely to render the subsequent treatment of no avail. A few hours after birth, the jelly and sac are no longer translucent, so the diagnosis is much easier to make immediately after delivery.

The pathology confronting us in this condition varies widely. There may simply be a bulging navel which contains a piece of omentum or loop of intestine. From this small deformity, we may find increasingly large and severe types which contain several loops of intestine including the transverse colon; cecum and appendix; coils of small intestine; a large portion of the liver, pancreas, spleen and stomach. Meredith reports two cases, one of which contained 30 c.c. of serum, most of the small intestine, cecum and appendix; the other contained the liver and most of the gastro-intestinal tract. These contents always seem to be surrounded by a thin layer of peritoneum, the amnion, and Wharton's jelly, though Downes reported one case where no Wharton's jelly seemed to cover the contents.

The very nature of these cases and their etiology usually render their treatment necessarily surgical. The existence of the infant in utero is most favorable to the healing over of the ring since there is no likelihood of increased intra-abdominal pressure by constipation, crying, colic, phymosis, coughing, etc. So, if the ring has not closed in these favorable conditions, we could not logically expect it to close after birth when one or all of the above named factors may collaborate to hinder its healing.

It is true that acquired infantile herniae are often cured by bandages and trusses, and the very small ones of the congenital type sometimes yield to conservative measures; but most of these and practically all of the more severe types with a large sac containing various abdominal viscera protruding through a large ring demand surgical treatment as the only hope for permanent cure, or even continuing life with any degree of comfort, or freedom from the fear of impending strangulation of the contents. It would appear logical then to use conservative measures only on the very small herniae which do not protrude far enough to be likely to become strangulated; but it is imperative that the large type be treated radically as soon after birth as possible.

In performing any surgical procedure on young infants, extreme precautions must be taken to forestall the development of infections or surgical shock.

Infection is best prevented by bathing the entire abdominal wall with sterile olive oil to remove the vernix caseosa, then ether is used to remove the oil. The skin is then cleansed with a



weak bichloride solution followed by alcohol which is washed off with sterile water.

Surgical shock in these cases can best be prevented by performing the operation in a very warm room with the patient on a warmed table, thus maintaining body temperature, and by performing the operation as quickly as possible, using the method which produces the least amount of trauma to the tissues. Normal salt solution should be given per rectum during or shortly after the operation, or, if necessary, it can be given hypodermatically.

The quickest and least traumatic procedure consists of ligating the umbilical vessels securely as close to the abdominal walls as possible. The sac is then opened prolonging the incision up and down the abdomen above and below the umbilicus just as far as is necessary in order to replace the contents without having to squeeze and handle them too much. As soon as they are all replaced, the sac is removed, transfixed and ligated, thus closing the peritoneum. The other layers are then closed by through and through mattress sutures of silkworm gut including all the layers and closing the entire incision in this manner.

When the wound is closed securely, sterile dressings are applied and a snug binder so fitted on that it will minimize pressure from within if the child should cry or become constipated. Every effort is made to keep the child quiet, and for the first few days it is fed with breast milk which has been pumped so that the exertion of nursing is avoided.

In older children and adults who still have congenital umbilical hernia, the surgical treatment is different. Here we are dealing with an individual more able to combat shock and infection, but who has had a hernia for a number of years, and the tissues have become stretched and thin so that they do not heal so readily as in the infant thereby necessitating greater precaution against a recurrence of the hernia.

The operation best suited for these cases is that described by Mayo in which a transverse elliptical incision is made through the skin overlying the herniae. The sac is then exposed, opened and its contents replaced; the sac removed and peritoneum closed. The wound is then closed transversely pulling the upper flap of transversalis fascia and aponeurosis down and overlapping it over the lower flap as far as pos-

sible without leaving too much tension, and it is sutured there with mattress sutures of chromic catgut. The elliptical incision in the skin is then closed removing any surplus skin. In this manner, we take advantage of the fact that the aponeurosis and fascia are stronger above and below the umbilicus than they are on the sides, and that the abdomen in many of these cases is rather fat and the tension is greater in the lateral direction than it is in the longitudinal.

Congenital umbilical herniae, especially of the large type containing other abdominal contents besides intestine, give a very poor prognosis, because of the severity of the operation for such young patients, and the likelihood of intestinal obstruction developing if they are not operated upon.

Downes mentions a series of 90 cases treated by laparotomy of whom 65 recovered. He says the prognosis is especially bad when a part of the liver is included in the hernia. MacDonald collected a series of 31 cases, 19 of which were treated surgically with only 2 deaths, while of the 12 treated by bandages 9 died.

#### Report of case: Baby O.

January 19, 1924, we were called to "stop a hemorrhage in the cord." Examination revealed a newly born, well developed male infant weighing 7 lbs. 10 oz. There were no anomalies on the body except at the umbilicus, which was about 6 cm. across and the cord gradually becoming smaller as it left the body. The cord had been clamped about two inches from the body, and the physician in charge said that it seemed to be getting larger and darker since it was clamped. Investigation revealed that bleeding was taking place into the cord and that it was getting larger. The contents of the cord could not be distinguished because of the darkened color due to the bleeding. It was apparent that some action had to be taken at once. The cord was opened on the side and found to contain several loops of small intestine, the cecum and appendix, some of the liver and considerable blood which was coming out of the liver where it had been torn, probably during delivery. Under ether anesthesia the incision was enlarged above and below the umbilicus, the umbilical vessels ligated with silk; the laceration of the liver sutured with catgut mattress sutures, and the contents of the hernia replaced in the abdomen; the wound closed with mattress sutures of catgut in the peritoneum, and of silkworm gut through all the other layers at once.

Normal salt solution was given to overcome the damage done by loss of blood and shock from the operation. The baby did well, ate well, had normal bowel movements, and maintained a temperature around 99 most of the time. Just eight days after the opera-

tion the baby suddenly became very pale, and expired before we reached the hospital.

Post-mortem examination revealed that the sutures in the liver had sloughed and that a branch of the hepatic artery was open from which the infant had bled to death.

#### Conclusions:

1. The cord of every baby should be carefully examined for hernia immediately after delivery.

2. The prognosis of large congenital umbilical hernia is grave, but better in cases treated surgically than in those treated conservatively.

3. The author's case was unusual in that the liver had been injured during delivery.

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#### DISCUSSION

Dr. W. R. Cubbins, Chicago: This is rather an unusual condition and it should be recognized as soon as possible because then the child is absolutely clean and does not need very much sterilization. When these children are born they should be put in a sterile towel and taken to the operating room. Whatever little caseous material is present can be wiped off. You must remember that these children cannot lose very much blood. The smallest blood loss devitalizes the child. I would not use ether in any of these newborn children. I am not so sure but what they could be operated on with little or no anesthetic, a drop of ether or chloroform after a drink of whiskey. The memory of these small pain attacks is short. If you give them much anesthetic they are liable to pass out. They die so rapidly that it behooves you to use extreme care. Where the liver or small bowel is out it should be handled with care. An ordinary tear in an adult's liver will not produce much bleeding, but one in a child's liver will cause much bleeding. I think many times we under-estimate the value of the transversalis fascia. It is this fascia that holds up the anterior part of the abdomen instead of the fascia on the outside of the rectus. We must be careful to coapt the transversalis fascia in repairing these hernias. It means a certain amount of support is afforded.

Dr. A. U. Christianson, Rockford: This subject has been very well covered in the paper. As to the incision, it does not make much difference whether a transverse or rectangular incision is made as long as we have a good exposure. Some of these babies would do better if given not a transfusion but a small amount

of blood before we make any attempt to operate on them.

Dr. Cubbins spoke about these babies dying under the anesthetic and it reminded me of one time we were going to circumcise a little fellow; we had been in the habit of doing the operation without an anesthetic but this doctor did not want to see his patient hurt, so we proceeded to give a little chloroform and the child stopped breathing, but we were able to bring him back. As Dr. Cubbins said, these operations should be done with little if any anesthetic. Some of them can be started without any anesthetic. If there is some bleeding, whether the intestines are out or not, it can be stopped by putting a little compress on it. I am very much afraid of an anesthetic in a little baby. I believe we can do better work in little babies if we give some blood before we attempt any surgical procedure. It is a very simple matter to take a little blood from the mother and inject it into the baby.

Dr. H. P. Saunders, Chicago (closing the discussion): I wish to thank Dr. Cubbins and Dr. Christianson for their discussions. I attempted to open the abdomen and reduce the hernia without an anesthetic but I could not do it. This was a very large hernia. It contained the appendix and a small piece of liver which was bleeding. It was impossible with that baby crying and straining to reduce the contents in a satisfactory manner. It is true that ether or any other anesthetic is dangerous in these small infants, but with a good anesthetist a few drops of ether will quiet the baby so he will not cry.

This was a very unusual case and I am glad to be able to present the report to the Society.

#### ERYTHREMIA\*

#### REPORT OF A CASE WITH LOW HEMOGLOBIN

J. C. REDINGTON, M. D.  
 GALESBURG, ILL.

Diseases in which a decreased number of erythrocytes are found are rather common and have been fairly well investigated. However, conditions in which the red cells are increased above the usual number are not so well known principally because of their rarity.

Physiologically the red cell count is rather high at birth, beginning to decrease after four or five days, and gradually getting down to a level which is somewhat lower than the normal adult count. The number of red cells is higher in thin muscular individuals and also higher in winter than at other seasons of the year.

In high altitudes there is a moderate increase. A person with a normal count on going to live in a place considerable above sea level has a

\*Read before the Illinois State Medical Society, Section on Medicine, Champaign, May 19, 1926.



rather rapid rise in the erythrocyte count. This stays constant as long as the individual remains at this altitude but returns to the former count if they go to a lower altitude. This fact has been explained as due to the lower pressure of oxygen and probably represents nature's attempt to keep the supply of oxygen at a constant in the body.

A local increase is found wherever there is a stasis such as occurs when the arm is at a lower level than the body or if a tourniquet is applied. Applications of heat and cold also cause a local increase due to vasodilatation.

A secondary polycythemia is found very often in chronic bronchitis of long standing, especially if emphysema is present. I have seen counts of 9,000,000 and 11,000,000, respectively, in cases of this nature although the usual increase is only of a million or two. In congenital heart disease or in any heart condition with cyanosis of rather long standing there is a moderate increase in red cells. Any disease causing a large loss of fluids such as cholera produce a secondary polycythemia. Acute yellow atrophy is also said to be accompanied by an increase of red cells. A disease called Ayer's disease is a stenosis of pulmonary artery and is accompanied by a polycythemia. In all the above mentioned conditions the hemoglobin is increased in direct relation to the number of red cells and as a rule there is also a slight leucocytosis.

A primary polycythemia was first described as a clinical entity by Osler in 1903. Vaquez in 1892 and Rendu and Vidal in 1895 had described the same disease but it was not till after Osler's paper that the condition was recognized as a definite disease. Turk in 1904 described a comparatively large number of cases and since that time the disease has been studied rather thoroughly under the name primary erythremia or Vaquez-Osler's disease.

It is thought to be hereditary. Relatives of the individual who has the disease have been found to have a high count but no other symptoms present.

No activating cause has ever been found. Minot suggests that it is of the nature of a malignant change in the bone marrow, possibly somewhat similar to the myelogenous leukemias. He reports three cases that showed a leukemic blood picture developing with an anemia in cases that were typical erythremia.

Pathologically there is bone marrow hyper-

trophy with congestion. The spleen is usually enlarged and rather firm in consistency. The enlargement is probably due to its role as red cell destroyer. Occasionally the liver is also enlarged.

The symptoms come on slowly and no definite time can be fixed when they began. Usually an indefinite feeling of lassitude extending even to exhaustion. Blurring of vision has been described in several cases. Anorexia is common and vomiting is occasionally present with it. Gastric distress and in certain cases abdominal pain occur irregularly. Joint and muscle pains are common and vary in severity. A large number of patients have various nervous symptoms such as paresthesias. Dizziness is usual.

On physical examination, a peculiar reddish color of the mucous membranes and skin is invariably present. This color is intensified and becomes bluish on exercise. The face flushes easily. The blood pressure varies, occasionally being rather high but in many cases entirely normal. The spleen is usually enlarged, firm and not nodular. Green describes a case in which the spleen was quite large at first but at one period became normal in size though the blood count was still high. There are undoubtedly cases in which the spleen is not palpable, but these are rather rare and the diagnosis of primary erythemia is not certain. There are no characteristic changes in the urine except an increase of urobilin.

The blood shows an increase in the number of red cells varying from six to thirteen million. In each patient the number varies considerably from time to time. The hemoglobin is usually elevated in proportion to the red cells, from 120 to 150. Koester reports a case having a hemoglobin of 240 with a red count of over 13,000,000. Two cases have been reported of hemoglobin under 105, one of these being 85. The color index usually remains below one. The coagulation time is markedly decreased. The leucocytes are moderately increased or normal. The increase is in these cells that originate in the bone marrow. The platelets are also increased. The total blood volume is greatly increased principally due to the large number of cells.

The diagnosis of this disease rests on a triad of high red cell count, enlarged spleen and a peculiar, characteristic color of the skin.

Treatment has very little permanent effect.

Radiation of the red marrow bones has lowered the count in certain cases. Benzol has been used but it is rather a dangerous drug to give as it has considerable effect on the white cells also. One case of impotence has followed its use in this disease. Recently phenylhydrazin has been used and with more effect than benzol but without much hope of cure. In a case reported from the Johns Hopkins Hospital this drug was able to reduce the count to normal. The symptoms entirely disappeared but returned with the elevation of the count after about three months. A second course of the drug is said to be not so effective. Care must be used with this drug also. It is thought to produce its effect by an increased destruction of cells.

The disease lasts indefinitely and the patient usually dies of some intercurrent condition.

### REPORT OF A CASE

Mr. W. A., referred by Dr. A. F. Stewart of Galesburg, was seen first in September, 1923. The family history was unimportant; father and mother had lived to an old age. None of his relatives had had a similar condition as far as patient knew.

Mr. A. was 65 years old, married, no children. He had always been in fair health with no serious illness at any time, although he complained a great deal of minor disturbances. Present condition had come on rather gradually with no definite internal complaint. There were some rather vague gastro-intestinal symptoms. Patient was on a diet rather low in animal protein. No headaches but a more than usual amount of dizziness. He states that he has always had some dizziness on bending over and that face becomes flushed easily and had been so since a child. There were pains in muscles of lower and upper extremities and some pains in joints. No vomiting or diarrhea. Slight dyspnea on exertion.

Physical examination showed a fairly well developed and nourished individual. The most marked and prominent thing was the peculiar reddish color of face. The conjunctiva of both eyes was markedly congested. The pupils normal in all reactions. No nystagmus. Throat was practically normal. Heart and lungs normal. Also the blood pressure. The abdomen was not distended. No rigidity. Spleen and liver not palpable. In right hypochondriac region a mass, about the size of a hen's egg, was felt. This was slightly tender and moved when pressure was applied. Reflexes were normal.

X-ray examination of gastrointestinal tract was normal. Urine was practically normal. Blood examination showed an increase in the red cells varying around 7,000,000. The hemoglobin was always below 100, being 85 at the first examination. Hemoglobin was estimated with a Dare hemoglobinometer. Stools were normal. Wassermann negative.

Five months later the count was reported as 8,650,000 reds with a hemoglobin of 128%. General condition about the same. This count and examination was made when patient was in the south during the winter months. A Sahli hemoglobinometer was used.

In the late summer of 1925 patient developed an intractable diarrhea. There was no gastric pain. Patient attributed the beginning of this condition to chewing some gum which contained a cathartic drug. Bowels moved in a short time after eating, consisting largely of undigested food. No loss of weight had been noticed. His general symptoms were about the same as before. Examination was practically the same as previously except the mass which was in right hypochondrium was not palpable. Spleen was not enlarged. Examination of stool showed undigested food, but no parasites or ova of any kind were found. The blood counts were as follows:

Red cells—9,400,000  
 White cells—12,000  
 Hemoglobin—90% (Dare)  
 Differential:  
   Polymorphonuclear neut ..... 75%  
   Polymorphonuclear Eosin ..... 0.5%  
   Small Mononuclear ..... 18%  
   Large Mononuclear ..... 1.5%  
 No myelocytes. Red cells were normal.

Patient was put on a diet, some bismuth given, but there was little change in condition except for short periods of improvement. He has remained in about the same condition until the present time.

Examination on May 11, 1926, shows symptoms slightly more intense. Bowels move several times a day and often at night. The spleen for the first time is palpable, being enlarged almost three fingerbreadths below costal margin. It is smooth and rather hard. Not tender. The liver is not palpable. The blood pressure is 135-80. The conjunctiva is quite congested. The peculiar reddish color remains about the same. There is a maculopapular eruption, reddish in color, covering the forehead. It is quite itchy. It was first noticed a few months ago when the patient was in the south. He says there has been little change in the extent of the lesion and that local treatment has had no effect on it. The blood count is as follows:

White count 19,200  
 Red count 9,100,000  
 Hemoglobin 108% (Dare)  
 Color Index 0.6  
 Differential:  
   Polymorphonuclear neutrophils ..... 82%  
   Polymorphonuclear eosinophiles ..... 1.5%  
   Polymorphonuclear basophiles ..... 0.5%  
   Small Mononuclears ..... 6%  
   Large mononuclears ..... 10%  
 Two normoblasts were seen; a few poikilocytes and microcytes also present.  
 The viscosity was increased. The coagulation time was less than one minute.

### SUMMARY

A case of Vaquez-Osler's disease or primary erythremia has been presented which was first seen probably rather early in its development. Showing at first examination a polycythemia



with the characteristic reddish color of skin but no enlargement of the spleen. The hemoglobin has been lower than the number of red cells would seem to justify. The estimation has been made several times by a competent pathologist using a Dare hemoglobinometer which had recently been standardized. There has been considerable variation in the amount of hemoglobin from time to time, but the red cells have made a steady increase from 7 to 9 million. The red cells have always appeared normal in size and no nucleated ones were found until the last examination a few days ago. Recently the white blood count was found to be quite high but no abnormal white cells could be found. It is possible that this is one of those cases that will develop a leukemic syndrome with an anemia replacing the polycythemia. At first the spleen was not palpable, but after two and one-half years from the time he was first seen it was found to be quite large.

#### DISCUSSION

Dr. E. W. Crum, Waverly: I would like to ask the Doctor if he gets an edema of the lower limbs in those cases or if it is natural to have an edema in these blood pictures where you have no cardiac or renal lesion or anything else to account for an edema of the lower extremities. We usually expect those symptoms when we have cardiac or renal lesions or an hepatic lesion.

I have a case somewhat similar to that that has not any of those organic lesions of the internal organs. I wonder if the blood picture would produce an edema of the lower extremities.

Dr. Victor McClanahan, Aledo: I would like to ask the Doctor a question. I have a case of influenza with endocarditis and edema. What is the likelihood about the prognosis in my case?

Dr. Oscar Nadeau, Chicago: We had a case which I think was parallel to this. A woman with marked polycythemia who was becoming progressively worse that we carried along for about a year and a half by using her as a professional donor in blood transfusion. 600cc of blood were removed at each transfusion. For about a year she obtained a good deal of relief. Each time she gave up blood her red cell count would decrease from eight or nine million down to about six million. We used her as a donor approximately every two weeks for several months. It never did her any harm, but on the contrary gave much relief. Her dizzy spells were far better and she seemed to be doing well for about a year.

After a year's time we could get her red cells down but the symptoms remained the same. Two years later she became progressively and rapidly worse. This, of course, showed it was not a permanent treatment, but it at least gave a good deal of relief for the time being.

Dr. J. C. Redington, Galesburg (closing): In an-

swer to Dr. Crum, there is no edema in this case. I have seen cases of polycytosis with edema. I think it was most likely secondary to nephritis. Most of the cases have shown rather high blood pressure. Although the kidney function is not reported, I think it is probable there is kidney insufficiency and that would account for some of the edema. \*

Bleeding has not been used in this patient so far, though that is one of the things we contemplate. It has been suggested that we take away some blood from him.

In using these patients as donors, the only thing that would come to my mind is, would there be some danger to the patient getting the blood? It is considered that polycythemia is possibly of the same nature as leukemia. I do not know whether that would make any difference or not, except that it comes to my mind.

If I understood the Doctor correctly, he has a case of polycythemia. I would think the prognosis would not be as good as ordinarily for the reason they do not react very well to infections of that type.

#### DIET FADS\*

JOHN HARVEY KELLOGG, M. D.

BATTLE CREEK, MICH.

I have chosen "Diet Fads" as my title because I desire to emphasize the fact that while there has been developed within the last 50 years a real science of dietetics, based upon solid foundations in physiology and physiologic chemistry, practical dietetics with the laity and to a great extent with the profession, is still chiefly empirical. We are still following fancy, whim and precedent in making our own bills of fare and too often in feeding our patients. In every other branch of hygiene and therapeutics, such progress has been made that we may consistently talk about sanitary science and rational medicine. Under the great impulse given to physiologic research by Claude Bernard, Brown Sequard, Bouchard and their followers, the physiologic laboratory has gradually grown to be the dominating influence in therapeutics, and physiotherapy, once the butt of ridicule, under the guidance of physiologic research, has come to occupy a very honorable position. But in dietetics we are still, to a large extent, following fashion rather than physiology. The *mores* hold us with an iron grip in matters of diet as well as manners. Our primitive ancestors took their food direct from the hand of Nature and like other members of the animal kingdom, were guided by instinct to a proper selection as our

\*Address before Chicago Medical Society, December 15, 1926.

nearest relatives, the anthropoids still are. But the art of cookery and the manifold perversions of civilized life have deprived us, to a large extent, of our directing instinct and have not only left us without guidance in meeting our nutritive needs but have grafted upon us a great number of unnatural and often hurtful appetites and likings which have no useful relation to our physiologic needs.

Biologic eating is at least as essential to health and efficiency as is physiologic breathing. The human body is a mechanism. Its functioning, its durability are as much dependent upon care and conditions adapted to its needs as are the durability and performance of an automobile. The average man shows his incapacity as a chauffeur of his corpomobile by bringing his machine to the junk heap when it ought to be at the very acme of its useful activity. That something is wrong with our current eating habits is shown by the fact that when we ask a man to do anything requiring maximum efficiency, we have to put him in training for some days, weeks, or even months, to condition him. The typical primitive man is always in training because he lives physiologically. According to Roth, practically every man of the Zuni Indian tribe could make Nurmi quicken his pace in a running contest. We haven't yet solved the problem of regulating our lives under civilization so as to supply the compensations needed to make us at least as healthy and hardy as savages, although the facts which scientific research has unfolded to us within the last 50 years respecting the causes of disease and the conditions which make for health and longevity, if applied to human living with the same scrupulous care with which scientific findings are applied to industry, would undoubtedly do as much for human beings as has been done for domestic animals and plants and not only raise the average life span to 100 years, as Lauder Brunton predicted, but triple and quadruple the useful output of human life. We compel our horses, cows and other domestic animals to live biologically, to meet physiological requirements; why should we not give ourselves an equally good chance for health, long life and efficiency? The nutrition laboratory has in recent years studied every problem relating to human feeding with such definite and comprehensive results that it is now easily possible to

feed human beings, both the sick and the well, in a manner to meet physiologic and therapeutic indications.

The great light which has been thrown upon the digestive functions by the work of Pavlov, Carlson, Cannon, Ivy, and others within the last twenty-five years has led the way to progress in the treatment of digestive disorders far exceeding all that was known before, and has put into our hands therapeutic resources of inestimable value.

A practical application of all this knowledge to the bill of fare of the average citizen would undoubtedly add to his comfort and efficiency and lessen his chronic miseries. Unfortunately, the average citizen who interests himself in dietetics does not know where to go for sound information and is likely to be entrapped by any fad which happens to be at the moment on the rising tide of popularity. One such which, though never likely to become extremely popular, is just now doing considerable harm, is the fasting fad. Some years ago fasting was heralded and widely exploited as a cure-all for chronic maladies of all sorts and was especially commended as a psychic illuminator, but the present interest is chiefly among women and especially college girls who while in good health foolishly desire to reduce their weight to meet the demand of fashion for slimness. Persons who are overfat as the result of overeating may very properly lessen their food intake; but a reduction of weight below the normal standard by a horizontal cut in the bill of fare, is positively dangerous. Vital resistance is lowered, and the way is opened for a recrudescence of the latent tuberculosis which is lurking in the system of the average citizen awaiting a favorable moment for development.

It is not to be forgotten that food is fuel, and that a reduced food intake does not necessarily lessen the amount of fuel consumed by the body, but only changes the source of supply. When not supplied with other fuel the body consumes itself. And the tissue destruction is not confined to surplus fat. The muscles and other soft parts help to feed the vital fires when food is withheld, and even the bones suffer in long fasting.

According to K. Von Noorden the percentage loss of the several tissues may amount to 95 per cent. of the fat, 40 to 45 per cent. of the muscles,



heart, glands and blood, and 10 to 15 per cent. of the bones. It is evident, then, that a fast is a highly destructive process in which the vital machinery may be seriously damaged.

The folly of fasting as a means of cleansing the blood or tissues from poisons was shown long ago by observations made upon the Italian faster Cetti (Zuntz). The daily examinations of the urine made showed a steady increase of phenol and other toxic substances from almost the beginning of the fast.

Women, especially those below forty years, should be warned against reducing their weight except under the care and advice of a competent physician; and in the arrangement of a reducing diet care must be taken to provide an ample amount of protein, the calory reduction being made by lessening the intake of fats and carbohydrates. The intake of salts, vitamins and roughage must be ample. Neglect of these precautions inevitably results in a definite and often serious injury.

Prolonged fasts are never necessary and do real harm. They do not purify the tissues. They cause intestinal stasis and as a necessary consequence a reabsorption of bile and other excrementitious elements. Food is a natural laxative. Hurst showed that the eating of food gives rise to a colon reflex which results in a forward movement of residues in the colon. Fasting causes stagnation throughout the whole intestinal tract. The gall bladder is filled with thickened bile, the intestinal canal with decomposing mucus, bile and other wastes and residues. The blood and tissue fluids instead of being purified are polluted by the reabsorption of bile and of putrefaction products. All the possible benefits of a complete fast may be secured by the great restriction of the intake of protein and fat for a few days. By this means the colon residues may be made non-putrefactive and non-toxic. By making the diet almost wholly carbohydrate in character for a few days, the intestinal flora is changed, the liver is well stored with glycogen and aided in its detoxicating function while the body is well supplied with the energy needed to maintain heat and bodily activity without drawing upon the tissues.

Another fad which did much harm in its time as well as much good is Fletcherism. About 25 years ago Horace Fletcher discovered the impor-

tance of thorough mastication as an aid to digestion and nutrition and started out on a world-wide mission in behalf of chewing reform. Mr. Fletcher's fascinating personality and his great skill in broadcasting his theories soon secured him quite a following. As his disciples increased his enthusiasm grew and he came to see in chewing reform not only an aid to digestion but the means of regenerating society and saving a lost world. He thought his discovery of sufficient importance to merit a monument of some sort and suggested to me that a place in the dictionary would satisfy his highest ambition. I wrote an article headed "Fletcherism," which was copied by the *Literary Digest* and other publications, and the word was launched. In due time "Fletcherize" and "Fletcherism" were discovered by the lexicographers and Mr. Fletcher felt that he was immortalized. I was willing to assist Mr. Fletcher in his scheme to get a monument because I had for years exhorted my patients to chew thoroughly as an essential factor in biologic eating. But I soon found myself in trouble because of a new discovery made by Mr. Fletcher and which he regarded as of such vital importance that he made it a leading feature of his philosophy. Having observed that when he masticated thoroughly he ate much less than formerly and that in consequence he had small and infrequent stools, he concluded that daily bowel movements were quite unnecessary and, in fact, cultivated constipation by discarding all roughage from his diet, laying down as a rule that everything which could not be liquefied in the mouth should be rejected. His theory was that by thorough mastication and avoiding all indigestible material, digestion and absorption could be made so complete that there would be little or no residue left for evacuation.

Mr. Fletcher was not impressed by the fact to which I invited his attention, that the colon is an excretory organ as well as a waste disposal mechanism, and that the liver pours into the intestine daily more than a pint of bile. Mr. Fletcher himself suffered greatly from chronic toxemia. His tongue was heavily coated and his breath was highly malodorous. His dentist informed me that his teeth were decaying more rapidly than in any case he had ever seen. Prof. William James, who was at one time one of Mr. Fletcher's most enthusiastic supporters, said

to a friend, "I tried Fletcherism for three months. I had to give it up. It nearly killed me." Dr. Von Someren, Mr. Fletcher's son-in-law and one of his most enthusiastic disciples, was under our care at Battle Creek for some weeks, for troubles resulting from colonic stasis, and later fell into a state of profound malnutrition and died. Mr. Fletcher himself died as a result of an exacerbation of a chronic bronchitis which was doubtless aggravated, if not chiefly caused, by chronic toxemia.

Mr. Fletcher rendered some service to the science of nutrition by his chewing experiments and especially by persuading Prof. Chittenden to undertake his famous research on the protein ration in 1902, to the expense of which Fletcher, or perhaps I should say, Mrs. Fletcher, contributed several thousand dollars; but he spoiled his campaign by cultivating and recommending constipation. His cult has become nearly obsolete, and his name will doubtless disappear from the dictionary; but, unfortunately, the idea which he exploited, that indigestible food elements are unnecessary and undesirable, is widely prevalent, and not alone as the result of Mr. Fletcher's teaching.

The structure of the human alimentary canal shows it to be adapted to deal with bulky residues. The colon is relatively large and sacculated, like that of an herbivorous animal. As a whole, the digestive tube in man is identical in type and structure with that of the chimpanzee and other of the higher apes. The explorer Akeley informed me that the gorillas of Mr. Mikenko lived almost exclusively on bamboo sprouts. Their stools, which he noted carefully as the best means of identifying their sleeping places, were numerous, soft and inoffensive. A most minute examination of these animals made in the case of each one killed, the entire alimentary tract being inspected from end to end, showed not a single parasite, although all other animals in the same region were invariably found to be much infested. He said, "The gorilla is the cleanest animal I ever came in contact with."

I have made inquiries respecting the bowel habits of the big apes of the London Zoo, the Paris Zoo, the Bronx Park, New York, the Cincinnati Zoo, and various other zoological collections, and have found without exception that these animals evacuate their alimentary residues

from three to six times daily. Less than three daily evacuations is regarded by the keepers as an indication calling for a change of diet by the addition of some "loosening food." Several keepers remarked that when the bowel movements were only two a day, the animals become "dull and spiritless." I became convinced many years ago that many human beings who consider themselves in good health and fortunate in having a regular bowel movement daily, are really handicapped to a greater extent than they appreciate by the undue retention of the body wastes. The enormous consumption of tea, coffee, coca cola and other beverages containing caffeine, a powerful nerve excitant, may be the natural result of an instinctive attempt to relieve a widely prevalent mental and nervous handicap.

Cannon showed many years ago in his work on "The Mechanical Factors in Digestion" that within nine hours after the taking of a meal, the work of digestion and absorption is practically completed, and the unusable residue has been pushed through the ileocecal valve into the colon. As Cannon pointed out, there is no physiologic reason why the food residues of each meal may not be evacuated within fourteen or fifteen hours after the meal is eaten, or even a shorter time. Such a prompt disposal of residues affords no opportunity for putrefactive changes and the development of the harmful products which invariably accompany anerobic decomposition processes.

Some fifteen years ago I sent to a thousand physicians located among savage or primitive people a questionnaire asking for information about the bowel habits of the natives with whom they were in contact. The replies I received indicated that human beings living under primitive or natural conditions, do not differ materially in their bowel habits from other primates. A physician located among the Bushmen of South Africa wrote, "A native called on me yesterday morning and asked for medicine to relieve constipation. I said to him, 'When did your bowels move last?' He replied, 'This morning, Doctor.' 'But I understood you to say that you were constipated,' said the doctor. 'Yes,' replied the native, 'I am horribly constipated. My bowels only move once a day.'"

The replies received from my questionnaire showed that the natives of the following coun-



tries habitually move their bowels two to four times a day: Rhodesia, Uganda, Nyasaland, Harda (India) Delhi, the Punjab, Kashmir, Nagtur, Bawda, Persia, Arabia, Japan, Aintab and Harpoot, Turkey, West Coast of Africa, Portuguese Congo, Egypt. In the last named country the children move the bowels four or five times a day. Dr. Cook of the Uganda Protectorate reported "in 9,642 out-patients seen within the last seven months of 1911, there were 174 cases of constipation, or 1.8 per cent.

The late Dr. F. D. Shepard of Aintab, who had practiced for 30 years among the Turks and knew them intimately, wrote, "The universal habit is to move the bowels three times a day."

Some years ago Dr. Arbuthnot Lane stated to Dr. Martin of Philadelphia and myself that a member of the Turkish Embassy of London called on him for relief because his bowels moved only twice a day. When his bowels moved only twice a day instead of three times, he said his energy was so much reduced that he was "but half a man." Mr. Lane let him get away without leaving his colon behind, but only on condition that he return to his former diet of whole meal bread and sour milk and make liberal use of paraffin oil.

I am convinced that the importance attached to the "well-formed stool" in an antique error, and that this so-called normal type is an evidence of stasis. It is present in the case of persons whose bowels move once a day for the reason that in such persons, as shown by Hurst and others, the residues are retained for 53 or 54 hours. This means that waste matters, which reach the descending colon ready for evacuation 12 or 13 hours after a meal, are, as shown by Hurst, Case and many others retained in the descending or pelvic colon for 40 hours longer, becoming more desiccated and compact, but in no way contributing to the welfare of the organism. In the meantime the residues of half a dozen more meals are accumulating in the proximal colon, distending and overstretching it, thus breaking down the ileocecal valve, an important barrier between the end gut, which in all vertebrate animals serves as a waste receptacle, and the mid-gut which is the chief organ of digestion and absorption.

Ileal stasis, the evils of which have long been emphasized, perhaps overemphasized, by Sir Arbuthnot Lane and his followers, has recently

acquired a new significance by the discovery of Ivy and his co-workers of a causative relation between the absorption from the small intestine of products of putrefaction as well as of digestion and the secretion of gastric acid. I have for many years noted the fact that symptoms of gastric acidity usually disappear quite promptly on the relief of intestinal stasis, which is nearly always associated with incompetency of the ileocecal valve and consequent invasion of the small intestine by the proteolytic flora of the colon. Jaffe and Nencki, and later A. Schmidt, showed (Levy) many years ago that putrefaction does not normally occur in the small intestine, that is, when the ileocecal valve is intact.

The result of the conversion of the end-gut and the mid-gut into a common cavity is to permit the anaerobic flora with its putrefactive products, which do little harm in the colon because of the limited amount of absorption, to invade the mid-gut and gradually to ascend until, as Faber has pointed out, the colon flora is found even in duodenum, which is normally free from pathogenic organisms. In this invasion of the mid-gut by a flora which is hostile and damaging to it, Seyderhelm, Nyfeldt and Faber find the most common cause of pernicious anemia; and Lord Dawson of London, as well as many other clinicians, sees in this putrefaction in the small intestine a handicap to the normal functioning of the body which may well be a contributing factor in a great number of pathological conditions.

The fact that the ileocecal valve is found to be incompetent in about 80 per cent. of all adults to whom barium meals are administered, as pointed out by Case, is a valid reason for taking effective measures to secure prompt evacuation of alimentary residues and avoidance of any excess of putrescible foodstuffs.

One of the most potent evils of the abnormal retention of wastes, which was pointed out a score of years ago by the late Sir Lauder Brunton, and still earlier by that peerless clinical teacher, Dujardin Beaumetz, is the reabsorption of bile, an excretory product which like the urine needs to be promptly evacuated. As Brunton showed, when reabsorbed, it becomes concentrated and its toxicity is increased. Besides, while in the intestine it undergoes decomposition changes which greatly intensify its toxic properties. The marked benefit sometimes ob-

tained from the non-surgical, as well as the surgical drainage of the biliary tract, may be justly attributed to getting rid of a quantity of stale and highly toxic bile.

The well known fact that the entire alimentary tract is traversed three to five times a day by a series of strong peristaltic contractions occurring especially after each meal and on first awakening in the morning is strong evidence that food residues and body wastes should be removed with such promptness that the residues of every meal would be evacuated within twenty-four hours.

Hurst pointed out some years ago that the taking of food gives rise to active movements in the colon. This explains the desire for evacuation experienced after each meal. Bowel movement usually occurs in healthy nursing babies soon after they are fed. The same is true of horses and other domestic animals, and even many persons whose colons are crippled to such an extent that they have long suffered from constipation, may by the adoption of a biologic mode of life, easily train their colons to evacuate after each meal. I have known this to be done in hundreds of cases and with very marked benefit. In most civilized communities the colon is so badly abused that constipation, or rather colonic stasis, has become so nearly universal that a degree of stasis which permits only one evacuation a day and causes retention of residues in the colon for more than 48 hours is regarded as normal. This unfortunate state of things is largely due to the fact that we are all house-broken in infancy. Our mothers teach us to restrain the colon and to repress the demand for evacuation, thus upsetting the normal rhythmic action of the intestine. Savage mothers carefully train their children to evacuate the bowels promptly and several times a day. Dr. P. N. Darling, of India, informed me that one of the principal duties of the Indleburds, a priestly caste, is to instruct the people in the care of the bowels as a religious duty, and that a fine is imposed for neglect. An Arab residing near Aden refused to live in the city because it was there impossible always to give prompt attention to the bowels.

The highly concentrated diet of the average American is unquestionably responsible for a multitude of physical and mental miseries, which a return to more physiologic eating habits would

quickly cause to disappear. The civilized part of the human race have an almost exclusive monopoly of appendicitis, colitis, gallstones, peptic ulcer, and even gastric and intestinal cancer. A reform in our colon habits might result in a considerable decrease in the demand for intestinal surgery.

Another widespread dietetic error is the breakfast food fad. More than a quarter of a century ago Bunge, the eminent Swiss physiologic chemist, and Gautier of Paris, called attention to the fact that the too free use of cereals tends to upset the chemical balance by lessening the alkali reserve. Sherman, of Columbia, Blatherwick, Sansum, and others of this country, have more recently continued the study of the influence of foods upon the chemical balance, and accumulated facts that leave little room to doubt that the too free use of cereals, especially in connection with meats, is responsible for a wide prevalence of acidosis in various degrees of intensity, in which may be found at least one of the factors which is lessening the life expectancy of the average American after the age of 45 years. Not only cereals but also meats leave acid residues in the body, meats to four times as great an extent as cereals.

Mr. Hunter, the able actuary of the New York Life Insurance Company, in a recent paper calls attention to the fact that the systolic blood pressure of the natives of China is ten points lower than that of the average healthy American, a fact which he attributes to the difference in the diet of the two races. His conclusion is supported by the fact that Chinamen in this country living on a meat-cereal diet have a systolic pressure equal to that of Americans, a condition which Hunter regards as unfavorable to longevity and one of the factors in decreasing the life expectancy of Americans after middle age.

I am fully convinced that the conclusions of Dr. Sansum and Mr. Hunter are well based. Since becoming acquainted many years ago with the facts pointed out by Bunge, I have urged the freer use of potatoes and other vegetables which yield alkaline residues, besides discarding meats and using eggs with great moderation, in the feeding of patients at the Battle Creek Sanitarium. We have laid increasing emphasis upon this point since Blatherwick, then an assistant to Mendel of Yale, worked one summer in our laboratory, where the early part of his work on



the influence of food upon the chemical balance was done. I was much impressed by the rapidity with which the acidity of the urine declined when the subject was placed upon a highly basic diet. To test the effects of our general dietary, I collated the blood pressure findings in 1,000 consecutive cases having a systolic pressure above 140 degrees. I found an average decline of 20 points within the first two weeks.

Under a basic regimen, very high blood pressure sometimes declines to an almost unbelievable extent. I recall the case of a business man who at 50 years was so broken down in health that he had retired. His systolic blood pressure was 260. Within a few weeks his blood pressure fell to 160, and he was able to resume his business. More than 7 years later he returned for an examination and his blood pressure was found to be still 160, the result of close adherence to a basic regimen.

Is it not reasonable to believe that in a diminished alkali reserve may be found a cause not only of high blood pressure but of a great number of chronic ills involving functional disturbances and structural changes? I am sure some members of this society are able to recall a certain period when the Salisbury regimen, which consisted of scraped meat and bread, was a very popular mode of dealing with cases of gastric hyperacidity, and a little later the same regimen was highly recommended for chronic nephritis. For many years, heavy protein feeding has been urged as essential in lung tuberculosis, notwithstanding the fact that the records of the Phipps Institute of Philadelphia show that 86 per cent. of those who die of pulmonary tuberculosis show profound disease of the kidneys, and in most cases of non-tubercular type. Since the physiologic chemists (Caspari, Rose) have shown that the protein of milk is superior to that of meat while it is so rich in lime that it has no disturbing effect upon the chemical balance, it would seem that this most wholesome and non-putrefactive nutrient should receive more consideration in the dietaries of Sanatoria for tubercular cases. Sherman of Columbia has shown that the protein of milk is so superior in character that muscle protein may be wholly eliminated from the bill of fare without injury, provide milk is used in sufficient quantity to supply one-tenth of the protein. And Boldyreff has

shown there are vegetable foods which are as potent in stimulating the gastric glands to activity as is meat.

It is to be remembered, also, that an ounce of milk contains as much lime as a pound of meat, a fact which especially qualifies the dairy product to render most valuable service in the battle of the tissues against tuberculosis.

In this paper I have endeavored to emphasize—

1. That dietetic fads may be dangerous, that physiology, not fashion or empiricism, should guide us in prescribing foods as well as drugs.

2. That prolonged fasting is a drastic and dangerous procedure. That it is very rarely indicated. When undertaken, it should be only under the care of a qualified physician.

3. That the popular fear of roughage is quite unfounded. Coarse foods rarely irritate the intestine; they only titillate. The bowels should be trained to evacuate residues and wastes three times a day or after each meal.

4. The excessive use of cereals and other foods which leave an acid residue, especially meats and eggs, tends to disturb the chemical balance of the body and thus may become a cause of widespread invalidism and inefficiency. The remedy is to be found in a freer use of milk, potatoes, fresh vegetables and fruits.

## HERNIA: A PUBLIC HEALTH PROBLEM\*

EDMUND ANDREWS, M. D.

CHICAGO

The magnitude of the hernia problem is best shown by a study of the incidence of the disease, as illustrated by the subjoined table:

Berger <sup>1</sup> .....	1 in 22
Malgaigne, Saxon Army <sup>2</sup> .....	1 in 21
French Army, 1880.....	3.6%
E. Wyllys Andrews <sup>3</sup> .....	1 in 15-20
Report of draft boards U. S. A. <sup>4</sup> .....	
.....	57,372 in 2,500,000
(That is 2.08% between ages of 21-31 in U. S. A.)	

From the above data it is reasonable to assume that there are between 4 and 6 million sufferers from hernia in the country, and hernia never gets well spontaneously except in the

\*Read before the Section on Surgery, Illinois State Medical Society, Champaign, May 18, 1926.

<sup>4</sup>From the Surgical Department, University of Illinois.

very young. The real measure of the harm done by hernia is obscured by the fact that it is not a killing disease. It is rather a crippling one, and the extent of this reaches appalling proportions, even when compared with such serious factors in our health as tuberculosis or heart disease against which such extensive campaigns have been waged. As will be demonstrated later, while the fight against these scourges has yielded comparatively little results, in the case of hernia the problem can be solved to the extent of perhaps 99%.

Unfortunately the death rate from hernia cannot be accurately stated. In our vital statistics it is classed with intestinal obstruction. The actual mortality is generally due to strangulation. The frequency of this complication is given by Berger<sup>1</sup> as 14 per cent in women and 3.6 per cent in men. These figures are obviously too high, as nearly all strangulated hernias consult the physician and only a minority of unstrangulated ones do. The mortality of strangulation varies from 5 per cent in the first 12 hours to over 50 per cent after three days. Gut resection has a mortality of 60 per cent. (Alexander,<sup>5</sup> Henggeler,<sup>6</sup> Gussew,<sup>7</sup>.) These figures indicate that the chances of any given hernia proving fatal are between one and two per cent.

About 10 per cent of cases will eventually develop such extensive herniation as to become unfit for manual labor. This includes those with enormous eventrations where the abdomen will no longer contain the viscera; the operative failures, generally due to operation in the late stages, and those in whom, for extraneous reasons, operation is contraindicated.

The remaining nine-tenths are definitely below par. They are unfit for active military service, or at least are classed as such. Government, industrial authorities and students of hernia estimate this disability as about 25 per cent. In addition they are finding it increasingly difficult to procure employment on account of the possibility of legal complications.

The present handling of this problem affords us as doctors little cause for pride.

A small percentage is operated upon, and in even this group the surgery is seldom performed at the most favorable time. This is especially true of hernia in children. About one-seventh

of all herniae occur in the first year of life and about one-third in the first decade (Watson).<sup>8</sup> The optimum time for operation except in very young children is the earliest possible. Every month in which the hernia is distorting the abdominal wall, stretching the ring and causing atrophy of the surrounding muscles and fascia makes the chances of permanent cure less. Numerous statistics are available to prove that the recurrence rate in children is less than one per cent and that it rises to over 10 per cent in simple indirect hernias in old age (Coley,<sup>9</sup> Murphy.<sup>10</sup> These figures as a rule exclude the herniae permagnae, strangulated and complicated hernias. The current practice of telling a man with hernia to wear a truss for a while and then be operated on when it is convenient, may be next year, cannot be too vigorously condemned. The patient should be called upon to decide if he wants to wear a truss all his life or be operated on, and if he decides upon operation he should be made to understand that postponing the operation materially lessens his chance for recovery.

An enormous number of hernias, especially in children, are utterly neglected. The mother thinks he will "outgrow it," or that she will not submit the child to the risk of surgery. After the failure of truss management in children under 4 or primarily in older children, operation is most urgently indicated. They very rarely disappear spontaneously. The danger is in reality much less than tonsillectomy, an operation performed on the slenderest indications, and the results are excellent. Postoperative pain and discomfort are only a small per cent of what an adult has to endure. And, most important of all, the results are uniformly excellent, which certainly cannot be said of hernia surgery in older subjects (Taylor,<sup>11</sup> Davis,<sup>12</sup> Erdman.<sup>13</sup>).

It is a disgrace to the medical profession that truss management is left almost entirely to the layman. Many are simply told over the counter, or even by mail. The hope of cure, utterly unwarranted, is uniformly held out by the purveyor. Their object is to sell the truss, not to cure the hernia. Considerable experience in this line has led me to the conclusion that adequate truss management of a hernia is a matter of considerable difficulty and calls for careful supervision and education. One-third of trussed



cases examined had a hernia outside, which was being squeezed by the truss. Many others had obviously ill fitting trusses which caused much discomfort. There is indeed a large class of cases in which adequate trussing is utterly impossible. In order to insure proper trussing careful co-operation between the truss fitter and the doctor is required. After the initial application of the support, frequent reexaminations needed to ensure complete retention and comfort. These follow-up visits are necessary for many months until the patient has become thoroughly educated in the mechanics of the parts and is able to meet the problem unaided. The utter lack of such education in general is well revealed by the fact that of 100 trussed cases questioned, 62 had not ever been told that it was necessary to apply the truss in the recumbent position.

In children, to get proper results, a period of hospital or bed rest may be necessary at first. Careful hygiene is necessary. Two trusses are needed and thorough education of the mother. The wool skein fable well illustrates the state of our practice. A hernia in an infant is generally far more difficult to retain than one in an adult. Very firm pressure by a spring truss is needed and in order to endure the pressure, the care of the inguinal skin is an important factor. Fortunately the inherent tendency for these canals to close in infants is very strong and I am inclined to think that under ordinary management most of them obliterate in spite of our trussing instead of because of it. This is especially true of umbilical hernias which close spontaneously in 95 per cent of children in spite of the practice of inserting a wedge-shaped pad into the hole. In children the development of the abdominal parietes is not deficient, it is simply delayed.

Another feature of the problem needing attention is the common folly that trussing will prevent the growth of a hernia. Most enormous hernias that I see give histories of having worn a truss from the very beginning. How often are we consulted by men with old hernias which up until recently had been easily amenable to truss management? They often give a history of a recent change in weight and suddenly the hernia is unmanageable. Operation is the only choice and we know all too well that we will find an excessive atrophy of the abdominal walls

and that our operation will be difficult and the prognosis poor.

#### HOW THE PROBLEM SHOULD BE MET

1. Children should be as carefully examined for hernia as they are for diseased tonsils. The possibilities for trouble are at least as great. Education for parents is a necessity.

2. All children with hernias should be properly trussed by a *doctor* and carefully followed up. About 60-80 per cent of cases are affected. (Coley,<sup>14</sup> De Garmo.<sup>15</sup>)

3. After the age of 4-5 or if trussing fails, early operation is urgently indicated. Waiting is folly. 99 per cent of cases may be expected and practically no mortality.

4. In adolescents early operation cures 98 per cent.

5. Proper truss care for such individuals as will not or cannot submit to surgery. The present state of this important science is a disgrace to the profession.

Finally, one may sum up by saying that the hernia problem involves 4-6 million cases and is capable of solution to the extent of 99 per cent. At present it is hardly 50 per cent solved. Does the tuberculosis problem with \$150,000,-000<sup>16</sup> invested in sanatoria, etc., or the cardiac or venereal problems offer equal promise of result from our efforts?

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#### DISCUSSION

Dr. Flint Bondurant, Cairo: The excellent paper of Dr. Andrews has to do largely with the information of the laity on hernia. There is a wide variance in the information which the average layman has regarding hernia. Several years ago it was my opportunity to examine a series of several hundred cases in which it was found that three or four per cent of these men had hernia and did not know it. On the other hand a week or two ago there appeared in this office a man with his wife and satchel ready to go to the hospital to be operated on for hernia. It developed that several years ago he began to have pain in his left inguinal region and decided he had a her-

nia. He wrote to an instrument house and secured a truss which he wore. The truss annoyed him and he decided to have an operation. On examination there was no indication that he had a hernia. If the patient is sure he has a hernia then the problem comes, what are you going to do about it? Unfortunately, as Dr. Andrews has said, a great many of these people depend on the surgical house without consultation with a doctor. I know it is so that a great many wear a truss who do not need it and a great many wear them in an improper manner. Assuming they have a hernia, a great many do not go to a doctor or take their children to a doctor because they fear operation is going to be mentioned, right away. They do not know that three-fourths of young babies are going to be cured by proper treatment. They do not know that a great number must be operated on at a certain age, so I think it is important to educate the laity.

Closely allied to this is the industrial hernia and the relation to compensation boards. Undoubtedly all of us are called upon to determine by investigation whether an employe has a hernia which developed in line of duty. This subject has been talked over and over and seemingly medical men are at a variance as much as ever. In the opinion of some men only those cases which show direct trauma to the part involved should be classed as compensable hernias. There are other men who claim that every hernia which develops in line of duty should be compensable. As a matter of fact most of the hernias develop from indirect rather than direct violence. The question comes up, how are we to say without operation. At operation where there is found an old thickened sac, we can say this is an old condition. It is to be assumed that the average company does not want to wait until after operation, they want to know before operation whether they are responsible, because they do not want to undertake the financial responsibility of the hospital charge. If they admit responsibility they are also responsible if the disability becomes permanent. It is a matter of great interest to me. I would like to hear from some one as to what he considers compensable hernias.

Dr. G. A. McDonald, Fairfield: About twenty-five years ago I took up the question of the ambulant treatment of herniae. In quite an extensive experience I have found but few patients wearing a good truss well fitted. A large part of all trusses sold are bought from mail order houses in Wisconsin, New York and New Jersey. These houses carry on an extensive advertising business, making use of the public press and personal solicitation by mail. Their advertisements contain grossly exaggerated statements concerning the merits of their particular truss. The truss-wearing public are mulcted out of millions of dollars annually through these "blue sky" advertisements. But few of these trusses are useful to the purchaser and many of them are positively injurious to the wearer.

A truss to hold a rupture effectively must maintain pressure applied at right angle to the plane of the hernial opening. The pad should be specially

adapted to the case under treatment and the counter pressure should come directly from behind. There should be no constriction or pressure in any other place. The best truss has a frame of malleable wire that can be moulded to fit the pelvis. The spring steel truss is not easily adjusted to fit the different pelvic conformations. The elastic truss is the poorest of all. A truss opening in front is preferable to one opening behind. The elastic truss maintains a constant pressure entirely around the hips, interfering with circulation and frequently causing marked atrophy of the muscles and subcutaneous tissues. The only pressure that does any good is that applied to the pad, with the counter pressure from behind. All side pressure upon the hips is not only useless but injurious. The tension of an elastic truss is too great when the truss is new and too little when old. Many of these mail-order trusses are made with a large long pad fitted with a strap between the legs to hold it down upon the pubic spine to prevent the hernia from descending into the scrotum. These pads maintain a constant pressure upon the spermatic cords and vessels and frequently cause hydrocele, varicocele, atrophy of the testicle and other troubles. These pads frequently allow the hernia to slip out into the inguinal canal behind them and the pressure of the pad upon the gut in the canal causes reflex stomach symptoms such as pain, nausea, vomiting, etc. It is not an uncommon thing to find a patient wearing a truss fitted over a hydrocele of the cord, varicocele, or enlarged inguinal gland.

## THE SURGICAL INDICATIONS IN FIBROID UTERI\*

W. A. NEWMAN DORLAND, M. D.

CHICAGO

ILLUSTRATIVE CASES

About three years ago a wealthy lady of Park Ridge, 42 years of age, told me in my office that her physician proposed to perform a hysterectomy upon her because of the presence of a fibroid tumor. She did not wish to undergo this operation if it were possible to avoid it, and her object in calling upon me was to ascertain if this could be done. She was in excellent health; her menses were not increased in amount, and she had no pain. All that she complained of was some vesical irritability with frequency of urination. Examination showed a uterus about three and one-half inches in length with a small fibroid nodule the size of a hickory nut in the anterior wall just above the internal os behind the bladder. As she was approaching the menopausal period, and in

\*Read at the meeting of the Illinois State Medical Society, Champaign, Ill., May 19, 1926.



the absence of bleeding or urgent pressure-symptoms, I assured her that there was no reason for her to undergo the risk of a hysterectomy. I believed that one or two applications of radium would be sufficient to effect a cure. If this did not follow, an operation of less severity, a myomectomy, would work a complete cure with a minimum surgical risk. She consented to this arrangement, and the following day I introduced 50 milligrams of radium into the cervical canal for twenty-four hours. A month later the patient took a trip to Europe and on her return six months subsequently she informed me that she had not menstruated since the treatment and that her symptoms had entirely disappeared. Examination at this time showed a perceptible diminution in the size of the growth; and a recent examination showed an almost complete absorption of the fibroid nodule.

A short time after I had first seen this patient, a colored woman, 34 years of age, visited my clinic at the Post Graduate Hospital, complaining of profuse bleeding from the uterine cavity which occurred every two weeks. There was in addition, considerable pain in the ovarian regions and persistent and intolerable backache. Physical examination showed a large multinodular mass, the size of a coconut, resting low in the pelvis where it was partially fixed. Because of the urgency of the woman's symptoms, especially the amount and frequency of the bleeding, I advised immediate operation. The uterus was readily removed, and the specimen showed numerous fibroid nodules of various sizes projecting from the peritoneal surface. Vertical section of the mass showed the uterine walls to be riddled with the tumors, with one large mass the size of a hen's egg jutting into and almost completely obliterating the uterine cavity. The patient made an uninterrupted recovery.

I have selected these two histories from my recent clinical experience as typical of the cases best suited for the surgical and non-surgical treatment of fibroid tumors of the uterus. There is no hard and fast rule, be it understood. Each case must be determined upon its own clinical manifestations, and by other circumstances, such as the desirability or non-desirability of future childbearing and the associated general physical condition of the patient.

*Fibroid Statistics.* Some authenticated sta-

tistics bearing upon the incidence of fibroid tumors of the uterus may help us to some extent in determining the line of treatment to be pursued in any given case. An average of statistics shows that 21 per cent. of all gynecologic patients have fibroid tumors of the womb. It has been estimated from post-mortem observations that among all women over 35 years of age 20 per cent. have fibroids; Bovée states this as from 20 to 30 per cent. It is estimated that 10 per cent. of white women and 30 per cent. of colored women have myomata of the uterus at the age of 50, but in the large majority of cases the tumors are small and symptomless (*W. J. Mayo*). These symptomless cases do not require treatment and have no surgical indications. The greatest incidence of fibroids is between the ages of 40 and 50—about 55½ per cent. Eighteen per cent. of fibroids require operation after the age when the menopause might be expected to have become established (*Giles*); and the more dangerous complications of the growths occur after 50 years of age.

*Fibroids and Pregnancy.* It was formerly believed that fibroid tumors of the uterus occurred most frequently in single or sterile women, and that the presence of the tumor gravitated against the occurrence of pregnancy. Today, we realize that this is not altogether true. Indeed, Hofmeier, Conklin (1914) and others claim that myomata facilitate, instead of prevent, conception. Conklin's statistics show that fibroids are more frequent in multiparæ than in nulliparæ or single women. On the other hand, it has been calculated by certain observers that two-thirds of the married women with fibroids are sterile, the sterility being due to the associated pathology of the Fallopian tubes and endometrium (*Berkeley-1911*). The combination of fibroids and pregnancy is most frequent between 30 and 35 years of age, as Berkeley has shown.

It is erroneous to believe that every pregnant woman having associated uterine fibroids is a surgical case. *W. J. Mayo* (1911) has best expressed this truth as follows: "It has been observed generally by the profession that the majority of women with myomata of the uterus undergo pregnancy, and often repeated pregnancies, with but little difficulty, and it is astonishing to see how tumors impacted in the pelvis

are sometimes lifted out spontaneously in the course of pregnancy. The necessity, therefore, of emptying the uterus when myomata complicate pregnancy vary rarely occurs, and hystero-myomectomy with the non-viable child must be one of the rarest necessities in surgery, because myomectomy is usually adequate to relieve the patient if acute degenerative changes occur during the course of pregnancy, and elective puerperal hysteromyomectomy (Porro operation) at term in cases where myomata are obstructing the pelvic outlet will, in the majority of instances, save both mother and child."

Tumors springing from the fundus and upper uterine segment may readily be removed by myomectomy without interfering with the pregnancy. The cases of interstitial fibroids justifying interference during pregnancy are few and far between. The choice of operation during pregnancy, if operative interference is indicated at all, lies between myomectomy and hysterectomy. Myomectomy is suitable if the tumor is pedunculated; but in cases of tumors impacted in the pelvis, involving the cervix, or invading the broad ligament, myomectomy is a much more dangerous procedure than complete hysterectomy.

Time will not permit me to enter largely into the surgical treatment of uterine fibroids. Briefly stated, there are but three methods of treatment which claim consideration in the presence of fibroid tumors of the uterus which are causing sufficient annoyance to induce the patient to seek professional advice. These are conservative myomectomy; hysterectomy, partial or complete; and radiotherapy. Each of these has its distinct indications, limitations and contra-indications which I will present concisely.

*Conservative Myomectomy.* A safe surgical rule to follow is this: Be as conservative as possible and as radical as is necessary. There is no doubt, as has already been indicated, that myomectomy is often indicated during the course of pregnancy, especially if the woman is in the early child-bearing period. Myomectomy should always have the preference before the age of 30. It is the best operation for young women. Between the ages of 30 and 45 the decision should depend upon the position, character and number of the tumors, as in the case of the first patient whose history I have reported today. Tumors

the size of the fist or smaller, and projecting from the uterine wall, are best treated by myomectomy, especially when associated with hemorrhage. A fibroid with a twisted pedicle should always be removed by myomectomy; if the entire uterus is twisted a hysterectomy will be necessitated. Myomectomy is impossible or inadvisable in the presence of multiple fibroids in large numbers, in cervix-fibroids, and in many cases of large fibroids. The operation is most suitable for single, subperitoneal growths. Even when the uterine cavity is opened during a myomectomy there is but slight danger of sepsis, since the cavity is usually sterile, as Webb (1912) has definitely proven. When this occurs, the mucosa should be closed first by a special suture.

*Hysteromyomectomy.* Hysteromyomectomy is the operation most frequently performed by the abdominal surgeon for the relief of uterine fibroids. There are certain absolute indications for the procedure, as follows: 1. Retention of urine from pressure upon or stretching of the urethra; 2. Pressure upon the ureters resulting in hydronephrosis or pyelitis; 3. Infection of the tumor; 4. When there is associated salpingo-oöphoritis; 5. When there is necrobiotic, cystic or sarcomatous degeneration of the tumor; 6. When the tumor obstructs the descent of a fetus during labor.

If the patient is over 40 years of age, hysteromyomectomy is the operation of choice, and after the age of 45 there will be but few exceptions to this choice. Also, in the presence of general uterine fibrosis, resulting either from septic metritis or due to a true arteriosclerosis, hysterectomy is indicated. Generally, supravaginal hysterectomy is all that is required, since Donald (1914) has shown that subsequent malignant change in the cervical stump is exceedingly rare. The primary mortality of this operation should not be more than 1 or 2 per cent.

*Radiotherapy for Uterine Fibroids.* The legitimate field for the use of radium or x-rays in the treatment of uterine fibroids is necessarily limited. Frank (1915), of the Mt. Sinai Hospital of New York City, states that the x-rays cannot be used with safety: 1. In rapidly growing tumors; 2. In cases of metrorrhagia when complete preliminary curettage is not feasible; 3. In complicated cases in which ovarian cysts



or serious adnexal trouble cannot be excluded; and 4. In fibroids complicating pregnancy. On the other hand, radiotherapy is of chief value when operation is declined or is contra-indicated by serious cardiac, renal or pulmonary lesions or because of extreme psychical unrest. It should also be avoided as far as possible in young women in whom the possibility of complete sterilization is undesirable. Tracy (1915) has concisely grouped the cases in which it is advisable to use this form of treatment as follows: Patients who are so reduced that they cannot stand operation; cases of marked anemia, in order to temporarily control the bleeding until the percentage of hemoglobin has become such as to warrant surgical intervention, and those who continue to bleed after a myomectomy when a histologic examination of the tumor and endometrium shows evidence of malignancy. Careful judgment, it is evident, must, therefore, be exercised in the selection of fibroid cases for non-surgical treatment.

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#### DISCUSSION

Dr. H. E. Ross, Danville: We are very grateful to Dr. Dorland for his excellent and concise expression of the fibroid status of today.

A conservation of the uterus, and the surgery of fibroids by myomectomy is a new step in advance over our standard treatment of a few years ago, that of hysterectomy. Myomectomy is indicated chiefly in cases between the twentieth and thirty-fifth year, where there is a probability of conserving the uterus with maternal possibilities and also the sexual life of the patient. The index for guidance is the rapidity and safety with which the operation can be performed; if there is a possibility of shelling out the fibroid more easily than to perform a hysterectomy. Stressing Dr. Dorland's remarks, myomectomy is indicated during pregnancy where preexisting tumors grow rapidly, where there is acute pain produced by red degeneration; where there are pressure symptoms making life a burden and when the position makes it almost certain that it will produce an obstruction during labor.

In doing a myomectomy we must not forget Ochsner's words, "In the repair of the site suture to pro-

duce hemostasis, but not blanching of the tissue, as blanched tissue means later necrosis." Whenever possible, make an anterior incision over the fibroid, so as to prevent adhesions to the small intestine. When the incision is made on the posterior surface of the uterus, a simple omental graft will prevent adhesions. It is easier and quicker in making the incision to carry it through the tumor, the cut surface of which is gripped with the vulsellum and easily shelled out.

A conscientious surgeon today weighs at least three possible procedures before determining upon his course. These are, first, the small but quite definite group of growths which are not giving rise to symptoms and which are discovered merely in the course of an examination. These obviously demand only observation and no active treatment of any kind. Second, possibly some 30 per cent., comprise those growths which are amenable to irradiation, and in the last ten years this method of treatment has become increasingly popular. Definite indications for radium are first, in interstitial myoma; second, in fibroids smaller than a three or four months' pregnancy; third, in patients near the age of the menopause; fourth, in fibroids associated with hemorrhage; fifth, in hemorrhage at the menopause with or without fibroids; sixth, in cases that have been curetted and no evidence of malignancy observed; seventh, in obesity and diabetes in which operation would be most hazardous; and eighth, in non-emotional types of temperament. Dr. John Clark has said that irradiation should be employed very cautiously in patients of a nervous temperament, as the premature menopause, which usually follows, may give rise to very distressing symptoms.

The contraindications for radium therapy are, first, in tumors larger than a four months' pregnant uterus; second, in tumors complicated by adnexal disease, as salpingitis, pelvic peritonitis, and ovarian cysts; third, tumors presenting symptoms which respond too slowly to give quick relief from radium; fourth, cachexia out of proportion to the blood loss, which is suggestive of red degeneration or necrosis of the tumor; fifth, in the large submucous type; sixth, in rapidly growing tumors, and seventh, in patients under thirty-five years of age, excepting occasional cases. It is readily seen that with so many contributors in the field radium therapy is held in rather narrow limits. We feel that if radium is applied only where clearly indicated the results will be most satisfactory to all concerned. It is obvious that it should be given by a gynecologist, who by examination of the patient under an anesthetic can determine whether radium is contraindicated and surgery should be the method choice.

While in women under forty carefully graded doses of radium may cause a diminution in the flow and not a complete menopause, it is in women over forty years where the full dose may be given and a complete menopause effected that radium serves its best purpose.

By the better pre-operative preparation of our patients, by the education of the profession as to the selection of cases for the application of the various

principles of treatment, and by the education of women that all cases are not surgical, all are not medical or radiological, that our mortality rate and morbidity from the pathologic condition can be greatly reduced. By educating the public to the necessity of bi-yearly examinations of the pelves of women from the ages of twenty-five to thirty, and subsequently quarterly examinations to the fiftieth year, better professional service to the women of our country can be given.

Dr. Henry Schmitz, Chicago: The presentation of the subject by Dr. Dorland was a very interesting and very valuable one. The most important thing is the frequency of occurrence. We recently in Chicago began a study of the frequency of these cases. In 1925 we have a frequency of about 1100. Of that number there were 64 myomata, 74 carcinoma, 34 cases of bleeding uterus which is very often associated with myomata, and 4 sarcomata; in other words, the frequency of occurrence of myomata was less than 10 per cent, while a carcinoma was a little more than 10 per cent, bleeding uteri 5 per cent, and sarcomata less than 4 per cent.

Another very interesting study was made to observe the difference in the two races, Negro and Caucasian. While the frequency of myoma in white women is 3.1 per cent, it is practically 9 per cent in the colored.

We also studied the frequency of hemorrhage in these conditions. We were under the impression that every carcinoma must have bleeding and that every fibroid, or at least the majority, were associated with bleeding. Here also we found some very interesting observations as regards the bleeding uterus. In the four sarcomata we had as the most pronounced symptom bleeding. In carcinoma of the uterus there was bleeding in only 40 per cent, and in the myomata less than 4 per cent.

As far as the indications for treatment are concerned, they have been set forth by Dr. Dorland and by Dr. Ross in the discussion. For purpose of clearness they divide myomata into three classes. We have myomata which do not cause symptoms, which are usually accidental findings on general physical examination. Then we have another myoma which we call the bleeding myoma; and finally we have the painless myomata and myomata which cause pain like dysmenorrhea pain or pressure pain. When we take these three groups the treatment is much more simplified. Simple myomata do not require treatment. We should keep them under observation. It is entirely unnecessary to inform the patient. You should inform the family so that should the patient later consult another physician who finds the myoma, it will not cause dissatisfaction.

As far as the bleeding myoma is concerned, if it occurs in women of thirty to thirty-five and is of the intra-mural type and not larger than a three or four months' pregnancy, radium is indicated. There are contraindications. Myomata larger than a three or four months' pregnancy should not be treated with radiation. Submucous myomata and cervical myomata should not be treated by radiation but should

be treated by surgery. They must always be operated upon. Myomata complicated with other pelvic disease like pericystic disease of the adnexa should never be subjected to radiation. Finally, a patient with extreme nervous symptoms should never be subjected to radiation.

As far as surgery is concerned, we have two prospects. Myomectomy should always be performed when we wish to preserve the child-bearing function. Hysterectomy should be performed in all other cases. It is always necessary to remove the cervix because of the possibility of cervical carcinoma developing later.

Dr. Edward H. Ochsner, Chicago: I would like first to emphasize the limitations of radiation in fibroids. I happened to come into the practice of medicine just about the time when the spaying of women was a very common practice among gynecologists. Even a small fibroid was considered sufficient reason for double oophorectomy. When I was an intern in the Cook County Hospital I had at the same time under my care three women who were complete mental and physical wrecks because they had been spayed. One evening after returning to my room I had a little conversation with myself and I made up my mind then and there that as long as I practiced medicine I would not be guilty of removing all the ovarian tissue if it could possibly be avoided. Many of those women who are today treated with x-ray and radium are just as much mental and physical wrecks as the women who had the ovaries removed thirty years ago. I have in mind just now an unusually fine, stable, brilliant woman whom I saw in consultation not very long ago, who had suffered from a fibroma the size of an orange which was subjected to radiation. Before radiation she was stable, she managed the large contracting business left her by her husband and had brought it to a successful termination. About three years after she began to have the bleeding she had radium treatment. At the time I examined her she was a nervous wreck. I do not think that such treatment is right. She would have been very much better off if treated by surgery.

Dr. C. W. Barrett, Chicago: We do not know exactly how far back Dr. Ochsner's memory goes in regard to these cases, but my memory does not go back to the time when gynecologists spayed women for their amusement. Gynecologists fortunately have been respected in the medical profession and we number among them such men as Kelly, Tait and Dudley. It is true that sometimes in carrying out their early work they did things that afterward proved to be a mistake. General surgeons have done the same thing and oftentimes the nonspecialist carries on a certain line of work that the specialist has given up. So much for that phase of it.

Then Dr. Ochsner went on and said some very good things about the x-ray. We differ as regards the indications for surgical work upon fibroids. When we come to see the limitations of the x-ray, a thing that would appeal to many patients, and when we find that



the limitations are so small, we can almost say that the indications for surgical work in fibroids are two things: One is a patient with a fibroid that is giving symptoms which amount to anything that is not a surgical disability. The next is the surgeon with experience in the line of work that can reduce the mortality to almost nil. That will seem perhaps rather radical, but surgery is oftentimes more conservative than the so-called conservative procedures, as Dr. Ochsner has pointed out. To do a non-surgical thing that might be counted conservative and destroy the patient's ovaries is about the most radical thing that can be done. What are the limitations for the use of x-ray? I would say that they are putting it rather too widely when they say that a fibroid up to the size of a four months' pregnancy is an indication for radium treatment. Three or three and one-half months would seem to be just about fair. Second, the fibroid should not be growing into the cervix, and next, it should be growing into the uterus. Next, it should not be hanging far outside the uterus. Next it should not have attained a size that would already be making pressure symptoms. Next, it should not have any degeneration. Next, it should not have any complications like an ovarian cyst or pus-tubes or peritonitis or inflammatory conditions.

The indications for radium treatment in fibroids are in young women near the menopause, whose fibroid is of small size and producing moderate symptoms. To say that a woman who has a large fibroid and who is having excessive hemorrhage is a case for the use of radium treatment only is not correct. She can be gotten into condition for operation. If she is in so bad a condition that she cannot stand operation, the chances are that for a time she will have the hemorrhage cease from radium treatment. The argument that so many fibroids are found in women which do not need treatment is not very much of an argument. Not every patient who has a fibroid needs surgical treatment.

Dr. E. H. Weld, Rockford: There is just one point that I wish to make; that is, we can have conservative therapy. I cannot let the statement go by that it is a mistake to ever give radium to a woman in the child-bearing period. I challenge that statement. I believe there are indications for the use of radium in the woman who is bleeding, who is in the child-bearing age and who has a very small intramural fibroid. She can be relieved of her symptoms by conservative radium treatment and afterwards she can go on and give birth to normal babies.

Dr. Harold Swanberg, Quincy: I believe there are just as many conscientious radiologists in this country as there are conscientious surgeons and that *they know* the indication and use of radium in fibroids. Large doses of radium will bring on the menopause and are contra-indicated in women under 40 years of age. Radiologists are fully aware of this and for this reason usually recommend surgery in the younger women. However, if for any reason, it is impossible to operate on these patients, very satisfactory results are frequently obtained by a *small* dose of radium, without

bringing on the menopause. It is interesting to note who is the chief exponent and pioneer in the use of radium in fibroids in this country. It is not a radiologist, but a gynecological surgeon—Dr. Howard Kelly of Johns Hopkins. I believe that Dr. Barrett and some of the other surgeons will secure a great deal of enlightenment on the use of radium in fibroids, if they will read some of Dr. Kelly's contributions to the literature.

Dr. W. A. N. Dorland, Chicago (closing the discussion): My paper has done just what I wished it to do: it has brought out a very interesting discussion.

I am afraid Dr. Weld has not looked over the recent literature on the therapeutic use of radium in child-bearing or pregnant women. I think this is something that should be considered. The danger of injuring the tissues of the early embryo, as well as those of the ovary of the mother by the therapeutic use of radium and x-ray should be borne in mind. Dr. Barrett is correct when he indicates the extreme rarity with which radium or x-ray can be used in the treatment of uterine fibroids. In not more than 6 per cent of the cases which apply for treatment are these remedies applicable.

## ACUTE PERFORATIONS OF THE STOMACH AND DUODENUM\*

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The most serious complications of ulcers of the stomach and duodenum are hemorrhage, perforation and stenosis. To these might be added carcinomatous degeneration except that the causative relation of ulcer to carcinoma has not been definitely proven. Of these conditions stenosis is slow in developing and thus offers ample time for diagnosis, whereas hemorrhage and perforation may be classed as surgical emergencies because of their rapidity of onset and grave threat to the life of the patient. Hemorrhage is the more spectacular occurrence and because of the very evident symptoms which it produces diagnosis is readily and quickly made. Perforation, on the other hand, is a surgical condition of great importance because of the absolute necessity for operative interference within a limited number of hours and the almost certain fatal result which follows failure or delay in diagnosis.

Perforation of the stomach and duodenum, other than traumatic, may be acute or chronic and it is the acute group which demands such urgent attention. Chronic perforations commonly follow penetrating ulcers which are dis-

\*Read before the North Shore Branch, December 7, 1926.

tinguished by their callous margins and attachment by adhesions to nearby organs. Because of these limiting adhesions the inflammatory reaction remains localized, the adherent organ forms a new floor for the crater and spontaneous recovery occurs with persistent gastro-intestinal disability. Diagnosis is possible only by use of the x-ray or exploratory operation.

Such penetrating ulcers are practically always found in the stomach because of the contact of that organ with surrounding viscera. They are usually located posteriorly and so are found most commonly adherent to the pancreas. The factors which determine whether or not a perforation will become covered are the proximity of a fixed organ and the motility of the ulcer bearing area. The regions most favorably situated are the posterior surface of the fundus, the lesser curvature and the posterior surface of the duodenum. The least favorable locations are along the greater curvature and about the pylorus.

Acute perforation is essentially a condition of young adult life. Half of the cases are found between the ages of 20 and 30 and three-fourths before the age of 40. Occasional cases have been reported in childhood. Nearly all are found in men so that occurrence in the woman is distinctly unusual. Acute perforations of the stomach are somewhat more common than of the duodenum and because of the greater size of the cavity a considerable amount of material may escape thus adding to the danger of peritonitis. Except immediately after meals, however, the gastric contents are not especially infectious and cultures taken during the first six to eight hours after perforation are usually sterile.

Little information is available as to the cause of perforation in a previously existing ulcer. In general the presence of ulceration may be attributed to one of several causes—local necrosis, gastric juice destruction following devitalization, arterial thrombosis, hyperchlorhydria, primary or secondary metastatic bacterial infection or to dietetic imbalance. In the last instance it is pertinent that in Germany and Austria during the starvation years of 1917 to 1919 the number of perforations almost doubled over that of previous or subsequent years.

Three main types of ulcer are found: First the large shallow florid ulcer with extensive induration which is easily recognized but which may present some difficulty in being differenti-

ated from an ulcerating carcinoma. Except on the posterior wall of the fundus any ulcer with a crater larger than a dime may be suspected of being malignant but clinical observation teaches that perforation of a carcinoma is rare. The second type is the medium sized round or oval ulcer with moderate infiltration and the third type is the solitary round or deeply fissured non-infiltrated ulcer, the so-called punched out ulcer. The two latter perforate with greater frequency than does the first but repair takes place more rapidly and thoroughly with simple surgical treatment. The large florid ulcers are more troublesome because of mechanical difficulty in approximating the edges, failure of repair, subsequent stenosis and persistence of ulcer symptoms.

The stomach lesions are located ordinarily in the anterior wall or about the pylorus. An occasional perforation is found on the greater curvature in which event the outlook for recovery is greatly diminished. Duodenal perforations are located close to the pylorus 60 per cent. lying in the proximal  $1\frac{1}{2}$  inches most often on the anterior or lateral surfaces. About one-fourth of all cases will show multiple nonperforated ulcers either in the stomach, duodenum or in both.

In the diagnosis of acute perforation three features are outstanding—sudden severe epigastric pain, boardlike abdominal muscle rigidity and shock. After a few hours symptoms of peritonitis appear and mask the original picture. Perforation may be preceded by a short or long period of gastric disturbance or may occur without warning in a patient previously in good health. Seldom can any connection be traced between the character of the previous meal or any exertion.

Vomiting may occur once or more during the early hours and usually after the ingestion of food or medicine. Pain is at first localized in the epigastrium or about the umbilicus, later becoming generally distributed over the entire abdomen. It is more acute when lying flat and may be so severe as to cause excruciating agony. Simultaneously there is often noted severe localized pain limited to, but not referred to, the right shoulder. In the late stages of duodenal perforation pain and tenderness may be more acute over the right iliac region because of the natural spread of peritoneal inflammation along the surface of the hepatic flexure down to that region. Muscular rigidity appears early, is



generalized from the first and persists until overshadowed by the increasing distension of peritonitis. Temperature is subnormal, later moderately elevated, the pulse rate is increased and the respirations are rapid and shallow. The facial expression is the pale anxious type characteristic of sudden peritoneal irritation.

At the end of five or six hours there occurs some remission of symptoms and the patient appears to rally. This apparent improvement makes diagnosis difficult at this stage although delay becomes increasingly dangerous. Shock decreases, pain may disappear but the board-like retraction of the abdominal wall persists. Soon afterwards symptoms of peritonitis appear and the abdomen becomes distended, the temperature rises rapidly, the pulse becomes rapid and thready and all the symptoms of intense septic poisoning appear.

Vaughn has demonstrated that fluoroscopic examination will show the presence of free air in the peritoneal cavity in many cases as early as two hours after perforation and this examination should be made when feasible. The presence of a shifting bubble of air is of diagnostic value but its absence does not eliminate the possibility of perforation being present. If, however, such procedure causes material delay it should not be undertaken. X-ray examination is also of value in ruling out one not uncommon source of error in diagnosis, lobar pneumonia, which may in its early stage produce a confusing set of symptoms without yet revealing distinguishing clinical signs.

Especially in those cases not marked by a history of previous gastric disturbances is it difficult to differentiate between acute perforation and appendicitis, pancreatitis, calculous cholecystitis and occasionally tabes and mesenteric thrombosis.

The most common source of error is in relation to acute appendicitis and in this regard it is well to remember that in perforations of the upper gastrointestinal tract the outstanding symptoms are those of peritoneal irritation and are sharply defined from the start, whereas in perforations of the lower tract the early symptoms are those of a progressive septic process. Later the development of a generalized peritonitis may lead to a similar picture in each case and at this stage it may be impossible to further define the condition than to make a diagnosis

of peritonitis secondary to perforation of some part of the intestinal tract.

Treatment is strictly surgical and the outlook for recovery depends less upon the type of operation than on the interval between the time of perforation and operation. Expectant treatment has no place in cases seen within twenty-four hours of the time of perforation. It has been aptly said that the patient's chance is better with simple suture and drainage done early than with the most complicated and skilful surgery done late.

Several methods of closure are available the simplest being inversion or plication of the ulcer edges, modified when feasible by overlaying the suture line with omentum for additional protection. Experimental surgery on the dog shows that removal of the mucosa and muscularis with the serosa intact results in perforation and death from peritonitis except where the defect is covered by suturing omentum over the serous surface. It seems rational therefore to cover the suture line with omentum especially as this step consumes practically no extra time. The omentum must be sutured into place for it is found that it cannot be relied upon to act spontaneously as a protective localizing structure as it does in perforations of the appendix or gall bladder.

In ulcers of medium size, that is with induration of not more than  $\frac{3}{4}$ -inch diameter, excision by knife or cautery may be practiced, followed by suture of the edges and burial of the suture line. Most of the ulcers of this size are found on the lesser curvature, the region best adapted to such a procedure. The technic is simple: the peritoneal and muscular coats are dissected back through a curved incision, a dull red cautery is used to destroy the entire indurated area and the edges are closed and covered and drainage instituted. The tendency to postoperative hemorrhage seems less marked after cautery than after knife excision. This method is also applicable to duodenal ulcers of small size and favorable location.

Because of unfavorable ultimate results as regards relief of ulcer symptoms there has been a growing tendency to supplement simple closure of the perforation with a posterior gastro-enterostomy. Despite the increasing use of resection of the stomach a great many chronic ulcers have been cured by posterior gastro-enterostomy alone.

Hence in a patient in good condition, operated on early, the addition of gastro-enterostomy seems to assure better and more complete ultimate recovery, and while this adds somewhat to the immediate danger it may be done safely in many cases and certainly reduces the likelihood of secondary operation. It is especially indicated in cases with pyloric stenosis, with large indurated edges and in duodenal ulcers.

Gastric resection has been done for multiple or very large calloused ulcers but save in exceptional cases it would appear safer to perform a more simple primary operation and resect later at secondary operation.

The abdomen is best opened through a high right paramedian incision which permits exploration or extension downward. When the peritoneum is opened the presence of perforation is indicated by thin watery free fluid and gas. The fluid may contain food particles or bile stained material and has no marked odor which is a contrast to the lower intestinal perforations where the fluid is purulent and has the characteristic odor of colon bacillus infection.

The perforated ulcer rarely shows the characteristic funnel shaped appearance of chronic ulcer but is either a hole punched right through the wall or an opening in the center of a calloused area. The procedure to be adopted in the presence of marked shock, peritonitis or systemic toxemia, should be of the very simplest type and the operation should be completed as expeditiously as is consistent with careful work. Operation should never be delayed for shock in the presence of peritonitis, as more harm will result than benefit gained by the delay. The peritoneal cavity is best treated by dry mopping and drainage to the site of the suture with or without stab wound drainage to the pelvis. Schoenbraun and Von Eiselsberg in a very extensive series of cases have used a routine irrigation with a hydrochloric acid pepsin solution but that practice has not been generally adopted.

After operation the diet is limited for 48 to 72 hours and drainage maintained for a variable period. In cases operated upon after the onset of peritonitis the postoperative treatment is that of peritonitis from other cause—morphin, fluids, alkalis, hot packs and postural drainage. Transfusion may be utilized before or after operation to tide over critical stages of shock or peritonitis.

Complications occurring soon after operation

include leakage which is looked for at the 8th to 9th day, hemorrhage, subphrenic abscess, peritonitis and paralytic ileus. When secondary operation is deemed advisable for persistence of the ulceration it is well to wait for about two months when possible.

The outlook for recovery in cases operated on within 6 hours is excellent and up to 12 hours the mortality is about 25 per cent. It then rises rapidly with each passing hour so that after a period of 24 to 36 hours the prognosis is very poor. Ulcers on the anterior wall of the stomach are the most favorably placed and those of the lesser curvature and anterior wall of the duodenum are somewhat less accessible but otherwise favorable. Those on the greater curvature show the highest death rate and greatest number of recurrences. Recurrence of perforation in the same or another location has been reported several times even after a lapse of several years.

X-ray studies of recovered cases show the presence of more or less adhesions to surrounding structures in most cases.

#### SUMMARY

Perforations occur mainly in young men with or without a history of previous gastric disturbance.

Diagnosis is established by the presence of severe epigastric pain, abdominal rigidity and collapse.

Treatment is surgical and early operation is imperative, the mortality being directly dependent on the interval between perforation and operation.

The type of procedure depends on the condition of the patient, the time elapsed and the type and location of the lesion.

The addition of posterior gastro-enterostomy reduces the likelihood of secondary operation.

30 N. Michigan Avenue.

#### WHAT SHALL BE DONE WITH THE PROSTATIC?\*

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CHICAGO

I propose this evening to discuss in a non-technical manner as possible the question of how to deal with acute and chronic urinary retention

\*1. Read at the Dec. 28, 1926, meeting of the South Chicago Branch of the Chicago Medical Society.

\*2. From the Department of Urology of the Michael Reese Hospital.



in elderly males general and of bladder neck obstructions in particular.

*Clinical Pictures*—The causes of acute retention of urine in the bladder of elderly men are:

1. Obstructions at the outlet of the bladder.
2. Stricture of the urethra which has become impermeable.
3. Periurethral abscess (compressing urethra).
4. Acute prostatic inflammatory conditions (acute prostatitis or prostatic abscess).
5. Ischiorectal abscess (compressing urethra).
6. Neurologic conditions especially tabes.

You will encounter the cases in both groups under the three following clinical pictures:

1. There is a sudden inability to pass urine, this being the first attack or a recurrence of one or more similar ones.
2. A sudden profuse hematuria accompanied by inability to urinate.
3. Cases in which there is a history extend-



Fig. 1. Plain film showing shadow of large calculus in bladder of prostatic.

ing back months to years of gradually increasing desire to urinate, especially at night, and at the same time more and more difficulty in starting the stream with the accompanying sensation that the bladder has been incompletely emptied.

You are all so familiar with these three clinical pictures that I will begin by a discussion of how to treat these acute retention cases in preference to first taking up the question of diagnosis of retention in general.

These acute retention patients belong in the

emergency class and one cannot stop to make an anatomical diagnosis until they have been relieved and tided over to a period when a more detailed urologic study can be made.

Our first inclination when one is called to see a man above middle age with his bladder distended half or all of the way to the umbilicus is to try to insert an ordinary solid tip Nelaton



Fig. 2. (a) Benign papilloma of the bladder. (b) Necrotic malignant papilloma of the bladder.

soft rubber catheter with the idea that such a catheter can be easily passed and the bladder immediately emptied.

Now you will in the first place find that your task of introducing such a catheter into the bladder is not as easy as you thought it would be and in the second place you may wish even if you have been successful that there had not been such haste in completely evacuating the bladder contents, whether these be urine alone or the latter mixed with blood.

You may find that a supply of catheters, soft rubber, woven silk or metal, of such varieties as I propose to show you,<sup>1</sup> is a very desirable and in many cases indispensable addition to the resources of a well equipped general practitioner's office.

Again there is still some difference of opinion regarding the advisability of complete emptying of the bladder at the first sitting. Many believe that it is perfectly safe to do so, but I am of the opinion that it is far safer to permit the contents, whether urine alone or mixed with more or less blood, to escape slowly so that twenty-four to forty-eight hours are required.

There is always danger of a sudden suppression of urine or a marked increase in the amount of bleeding if this is not done.

Such conditions occur often enough to make

1. Various types of catheters were demonstrated.

it advisable to decompress the bladder gradually either by the use of some modification of the Van Zwalenberg apparatus or more simply by inserting an inlying catheter and permitting a small quantity (two to three ounces) to escape every hour.

*Diagnosis*—We have seen that there are a



Fig. 3. (a) Opening of large diverticulum as seen on cystoscopic examination. (b) Varicosities of bladder wall, occasionally a source of bleeding in prostatics.

number of causes of both acute and chronic retention which must be considered.

An examination in acute cases of the tissues of the perineum and dejected exploration of the rectum will quickly eliminate perineurethral, prostatic and ischiorectal suppuration.

The urethral obstruction in stricture cases is met with usually at a point in the canal which is much nearer the external meatus than is the case in bladder neck obstructions. The passage of such an obstacle will often require the use of special catheters.

Granted that we have excluded all of the causes in acute cases except obstructions at the bladder neck and the neurologic conditions, we cannot stop to make a more exact diagnosis, but must wait until the patient's condition permits of a more detailed examination, the steps of which I can simply enumerate are all included at present under the heading "Urologic Study" as follows:

1. Clinical history.
2. Physical examination, especially blood pressure, heart, lungs, central nervous system.
3. Blood Study—e. g., chemistry (nonprotein nitrogen and creatinin) and coagulation time.
4. Tests for kidney function (Phthalein or indigo carmin).
5. Plain x-ray of entire urinary tract (especially for renal and ureteral calculi).

6. Urethrocystoscopy and rectal examination to determine:

(a) Type of obstruction at bladder neck whether a median bar, a contracture of outlet, a benign or malignant neoplasm of the prostate.

(b) The presence of a vesical calculus (in the bladder cavity itself or in a diverticulum). (Fig. 1.)

(c) The concomitant presence of a bladder tumor. (Fig. 2.)

(d) The presence of false (cellules) or of true diverticula. (Figs. 3 and 4.)

7. Cystography to determine: (a) the size of the bladder; (b) the size of diverticula if the opening of such were seen during cystoscopy, and (c) whether reflux (Figs. 4 and 5) is present or not.

Now you may say that this is rather a severe and usually needless examination in cases of chronic retention. Experience, however, has taught the urologist that many failures could have been avoided, and above all, the mortality greatly decreased years ago, had more careful study been made of these cases before treatment



Fig. 4. Cystogram of prostatic showing multiple small diverticula and partial reflux into the pelvic portion of ureters.

was begun. In the hands of those who devote their energies to the affections of the genito-urinary tract such a urologic study can be completed in a comparatively few hours. Nothing can be more discouraging than to have a high mortality rate after prostatectomy because the



heart, blood and the accompanying acute or chronic bladder and kidney conditions were not known or appreciated before operation. Again how disagreeable it is to have a patient return with the same symptoms because a large vesical diverticulum and similar complications had been overlooked.

I do not propose to discuss the details of how



Fig. 5. Lateral view of multiple diverticula of bladder with reflux into ureter. The bladder itself is very small as compared to the size of the diverticula. (Dr. F. M. Phifer's case.)

a patient should be prepared for operation, of the type of the latter nor the after treatment.

Obstructions at the bladder neck require the attention both before and after operation of the urologist. He is far better equipped both as regards diagnostic resources and training to give these cases the care they need. As soon as the acute emergency condition has been relieved it should be your duty to the patient to have a complete urologic study made before any operative procedure is considered. Let me impress upon you this one fact. Not every case of either acute or chronic retention is due to an enlarged (adenomatous) prostate, hence what shall be done with the so-called "prostatic" is to ascertain whether he belongs in this class or not.

## THE OTOLOGICAL COMPLICATIONS OF BASAL SKULL FRACTURE\*

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The otologist is especially concerned with fracture of the base of the skull because it involves the temporal bone in over one-third of the cases. Within the temporal bone are contained anatomical structures of great otological importance such as the internal ear with its two organs of special sense for hearing and maintenance of equilibrium, the middle ear with the ossicles, mastoid cells and Eustachian tube, the external ear and the membrana tympani, the 7th and 8th cranial nerves and the venous sinuses.

The otological complications occur in 64 per cent of the cases of basal skull fractures.<sup>1</sup> They are of vital importance as they may endanger the life or the future well being of the patient. The immediate result of an injury to the internal ear may be purulent labyrinthitis, meningitis and death; the remote result, a partial deafness accompanied by a marked tinnitus or with disturbances of equilibrium or a total unilateral or bilateral deafness.

Pathology. The mode of injury in 380 cases of traumatic fracture of the cranial bones was falls 219, street car 62, assault 51 and automobiles 48.<sup>2</sup> Among 454 cases of fracture of the cranial bones 89 per cent of which were basal, 178 involved the posterior and 166 the middle fossa.<sup>2</sup> Of 470 cases of skull injuries, 275 or 57 per cent, were basal skull fractures.<sup>3</sup>

The pars petrosa of the temporal bone is involved in 35 per cent of the basal skull fractures.<sup>1</sup> The excavations and canals as the jugular fossa, carotid canal, tympanic cavity, vestibule and the internal auditory meatus serve to weaken it and thus predispose it to fracture.

The labyrinth is involved in 25 per cent of the basal skull fractures.<sup>1</sup> It is less common for the bony capsule of the labyrinth to be fractured because it is composed of dense ivory-like bone.

The pars petrosa fractures most frequently in the longitudinal direction, i. e., parallel to its long axis, in the weakest portion, from the jugular foramen to the tegmen tympani et

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antri and the superior portion of the external auditory meatus. Less frequently, the fracture involves the internal auditory meatus, vestibule, cochlea and the inner walls of the middle ear. It may be fractured transversely through its base, at the tegmen and external auditory meatus or toward its apex.

Without the existence of a fracture of the pars petrosa, a subdural hemorrhage from a skull fracture may pass along the perineural lymph spaces of the auditory nerve and the aqueductus cochlea to the labyrinth. Hemorrhages of the labyrinth similar to those occurring in fracture of the pars petrosa may occur in conditions unassociated with skull fracture as labyrinthine concussion from external violence or explosion. The damage to the labyrinth in basal skull fracture is usually caused by hemorrhages into the membranous labyrinth rather than by fracture through the bony labyrinth.

Many observers have found labyrinthine hemorrhages without fracture of the bony capsule of the labyrinth in basal skull fractures. In Barnick's case,<sup>4</sup> blood was present in the external meatus and tympanum and necropsy showed dura mater, sinus, internal ear and tympanum were not implicated by the injury. The hemato-tympanum was caused by a fracture through the tegmen antri. In the auditory and facial nerves were many small hemorrhages. There were hemorrhages in the scala tympani of the basal coil of the cochlea, in the branches of the vestibular nerve and in the maculae acousticae. In Lange's case,<sup>5</sup> the line of fracture was parallel to the superior border and along the anterior surface of the pars petrosa. There were multiple fractures of the external auditory meatus, dislocation of the malleus and incus, rupture of the membrana tympani and hemato-tympanum. The labyrinthine capsule was intact, the peri- and endo-lymph spaces were free from blood, the auditory nerve in the internal auditory meatus was lacerated while the facial nerve was uninjured.

Yoshii,<sup>6</sup> from his experimental investigations on animals, concluded that the damage to the internal ear was molecular in character and that severe trauma caused a destruction of the acoustic end-organs which is accounted for by the fact that the stapes is suddenly forced into the

labyrinthine fluid causing a greatly increased labyrinthine pressure.

Clinically, we find in some of the cases of concussion of the labyrinth where the injury is slight that there is present a temporary functional disturbance which is subsequently restored to normal. These cases are often referred to as "Commotio Labyrinthi" and have been compared with "Commotio Retinae," a transient edema of the retina due to trauma.

The otological complications of basal skull fracture may be divided into the non-suppurative and suppurative. In the non-suppurative group, we have to consider: (a) injury to the bone, as fracture of the external auditory meatus, mastoid and pars petrosa with its bony labyrinth and cochlea, fracture or dislocation of the ossicles, and diploetic hemorrhage; (b) injury to the soft parts, as 7th and 8th cranial nerves, the vascular structures, membrana tympani, membranous labyrinth and Corti's organ. In the suppurative group besides suppurative otitis media and mastoiditis and suppurative osteomyelitis of the pars petrosa, we have to deal with the intracranial complications of otitic origin.

Fracture of the bony external canal is generally associated with a fissure fracture of the superior wall of the tympanic cavity, mastoid, pars petrosa and the base of the skull. In the vast majority of cases the membrana tympani is ruptured and there is a profuse hemorrhage from the external canal. If the membrana tympani remains intact a hemato-tympanum results. Fracture of the posterior superior wall of the external auditory canal with rupture of the posterior superior quadrant of the membrana tympani is frequently found. A fissure or comminuted fracture of the posterior wall of the external auditory meatus may extend into the mastoid cells and antrum resulting in an emphysema over the mastoid.

Injury of the facial nerve may occur as the result of laceration by the fractured bone or compression in the Fallopian canal from hemorrhage. The 7th and 8th nerves are frequently injured before their entrance into the internal auditory meatus or are involved subsequent to this. Politzer<sup>7</sup> reported a case of bilateral facial paralysis without disturbances of hearing. Brun<sup>8</sup> found facial paralysis in 17 per cent of



470 cases, while Moody<sup>8</sup> found it was less than 7 per cent in 547 cases of skull fracture. In 292 cases of basal skull fracture (Brun, Van Ness, Schmidt and Koehler) the facial nerve was paralyzed in 45 per cent of the cases. The paralysis of the facial nerve is almost without exception peripheral.

Injury of the lateral sinus occurred in 1 per cent of Brun's cases.

If a fissure fracture extends from the external auditory meatus to involve the mastoid and infection occurs a suppurative mastoiditis results. If the region of the sigmoid sinus is involved a perisinus abscess, phlebitis or thrombosis may occur. A fissure fracture involving the superior wall of the meatus externus and tegmen tympani may cause a laceration of the dura and results in pachymeningitis, extradural or brain abscess or meningitis.

Borden<sup>9</sup> found that meningitis was present in 35 autopsied cases of basal skull fracture in 8 per cent of the cases. Brun<sup>3</sup> in 470 cases of skull fracture found 8 per cent were complicated by meningitis. Moody<sup>9</sup> in 547 cases of skull fracture found that meningitis was present in 7 per cent of the cases. Basal skull fractures are more often complicated by meningitis than compound fractures of the vault. Brun's figures indicate that basal skull fractures were complicated by meningitis in 5 per cent of the cases. The chief routes of infection are in order of frequency, (1) the nose and its accessory nasal sinuses, (2) the ear and (3) the rhinopharynx.<sup>3</sup>

A suppurative labyrinthitis is usually associated with a suppurative meningitis. If a fissure fracture extends through the external and middle ear and into the internal ear, in the presence of a middle ear suppuration, there is great danger of involvement of the labyrinth and a fatal meningitis. Also, compound skull fractures may develop meningitis or brain abscess by direct continuity along the route of the involved vessels and nerves or by metastasis.

Clinically, the meningitic complications of skull fracture may be divided into two groups, early and late meningitis. The early or fulminating type of meningitis runs a very short course, the patient dying in from 2 to 7 days after the accident. In the late cases of meningitis the onset may occur in the second week to two months after the injury. Politzer<sup>10</sup> re-

ported a case of basal skull fracture that developed a fatal meningitis 7 weeks after injury. This case was unique in several respects. The patient, while walking, fell, striking his head on the hard pavement. The drum membrane was found intact and he was completely deaf. Necropsy showed a bilateral fracture of the pars petrosa with fracture of each labyrinth through the vestibule and extensive hemorrhage into both labyrinths. A suppurative labyrinthitis and meningitis was present. Klestadt<sup>11</sup> reported a case of late meningitis after labyrinth fracture in which the patient developed a fatal meningitis 30 weeks after the accident.

Brain abscess as a complication of skull fracture occurred in 1 per cent of Brun's cases. According to von Bergmann acute brain abscess develops in 3 to 5 weeks and R. Meyers states that chronic brain abscess requires 6 weeks.<sup>3</sup> Brain abscess may remain symptomless for months or even years. Harrison observed a latent period of 11 years.<sup>3</sup>

*Diagnosis.* The otological aids in the diagnosis of basal skull fracture are:

1. Profuse bleeding from the ear.

Moody<sup>8</sup> found bleeding from the ear in 24 per cent of 547 cases of fracture of the skull. Ransohoff<sup>12</sup> in 190 cases of basal skull fractures found bleeding from one ear in 31 per cent from both ears in 4 per cent. Borden<sup>9</sup> found hemorrhage from one or both ears in 75 per cent of 346 cases of basal skull fracture. Hemorrhage occurred from both ears in 11 per cent.

The duration of the hemorrhage from the ear is usually short; ordinarily, it ceases on the first or second day and it may be first noticed as a blood clot in the external canal and in the torn membrana tympani. Brun mentions a case of profuse hemorrhage from the ear in a basal skull fracture which lasted 9 days and caused a marked anemia. Usually the hemorrhage stops completely and all discharge is absent or but a slight serous secretion is left. The source of the hemorrhage may be from the bony external auditory canal, membrana tympani, mucosa of the tympanic cavity, diploetic veins of the fractured bone and the meningeal vessels. Buck<sup>13</sup> called attention to the occurrence of a copious and protracted hemorrhage from the tympanic

artery following simple fracture of the Glaserian fissure.

Visible bleeding from the ear is not a necessary accompaniment of fracture of the temporal bone. Buck<sup>13</sup> cites a case with necropsy findings of fracture of the pars petrosa without hemorrhage from the ear, and Politzer<sup>10</sup> a bilateral fracture of the pars petrosa.

It is necessary to exclude the entrance of blood into the canal from some external source. A rupture of the membrane tympani or a fracture of the external auditory canal may be unassociated with a basal skull fracture. In a simple fracture of the bony external auditory meatus due to a blow on the face or chin, the line of fracture is in the antero-inferior portion and extends inward to involve the anterior part of the membrana tympani.

2. The escape of cerebro-spinal fluid from the ear is less common than bleeding from the ear. The amount of the discharge is greater than that of blood and is of longer duration. It always signifies a basal skull fracture involving the temporal bone and is present in 20 per cent of the basal skull fractures.<sup>1</sup> It is a pathognomonic sign that the subarachnoid space has been opened. This usually occurs over the tegmen or in the sheaths of the 7th and 8th cranial nerves in the internal auditory meatus. The quantity of the cerebrospinal fluid that escapes may be as high as 600 c.c. in 24 hours.<sup>14</sup> It usually escapes through a laceration in the membrana tympani, or if it is intact through a fissure in the bony external meatus. Blood and cerebrospinal fluid may escape simultaneously.

3. The presence of brain substance in the external auditory canal is positive evidence of a basal skull fracture involving the temporal bone.

4. Fracture of the posterior superior wall of the bony external auditory canal with rupture of the posterior superior quadrant of the membrana tympani. Luxation or fracture of the ossicles. Lesion of the soft parts adjacent to Schrapnell's membrane.

5. Subcutaneous emphysema over the mastoid region is indicative of a fracture involving the mastoid cells which communicate with the subcutaneous tissues. (I had such a case of basal skull fracture on my service at Cook County Hospital.)

6. Peripheral facial paralysis is located on

the side of the injured nerve. If deafness is present it is on the same side as the deafness. When the chorda tympani nerve is involved, there is loss of taste upon the anterior two-thirds of the tongue on the side of the facial paralysis.

7. Disturbances of the auditory apparatus.

The peripheral portion of the cochlear nerve with its end organ, Corti's organ, located in the membranous portion of the cochlea is affected in the vast majority of cases.

The central portion of the cochlear nerve with its auditory tract in the mid-brain and cerebrum and the auditory center in the temporal lobe is rarely involved.

There is a disturbance of hearing in 24 per cent of the cases of basal skull fracture as a result of injury to the middle and internal ear.<sup>1</sup> In 27 cases of verified skull fracture, especially of the base, Nager<sup>15</sup> found 7 cases of unilateral total deafness and 11 cases of defective hearing due to injury of the internal ear. Middle ear deafness was present in 3 cases. In 6 of the cases, there was defective hearing present previous to the accident as evidenced by a history of occupational deafness or middle ear suppuration. In 5 cases the hearing was normal although the line of fracture partly extended through the external auditory canal. The fact that Nager found the cochlear nerve was involved in 67 per cent of the cases of skull fracture contradicts the usual statement (Brun, von Bergmann) that the facial nerve is by far the most frequent nerve involved in skull injuries and emphasizes the importance of making the functional hearing test in these cases. Graf tested the hearing of 39 cases that had recovered from fracture of the skull in which it was not suspected that the pars petrosa was involved. He found that hearing was normal in but 12 cases.

Often it is impossible to make the functional hearing tests immediately following the injury on account of the coincident stupor or unconsciousness of the patient. The examination should not be attempted until the patient has recovered from shock or clouding of the sensorium so as to be able to co-operate intelligently with the examiner.

Deafness or disturbance of hearing is present on the side of the lesion and is usually of the nerve type of deafness in which the Rinne test



is positive; the Weber test is localized to the sound side in unilateral involvement; there is lowering of the high tone limit and a slight diminution of bone conduction. In the incomplete involvement of the cochlear nerve a severe and persistent tinnitus or paracusis may be associated. Deafness for the high tones is due to complete atrophy of the nerve fibers in the lamina spiralis and changes in the ganglion cells in the lower part of the cochlea. (Passow.) The cochlear nerve is the more vulnerable portion of the 8th nerve. If a unilateral or bilateral total deafness appears gradually after the injury it usually signifies fracture of the pars petrosa. A complete loss of hearing occurred in 8 of 10 cases of skull fracture. (Buck.)

#### 8. Disturbances of the vestibular apparatus.

Like the cochlear apparatus, the vestibular apparatus may be divided into its peripheral and central portions. The peripheral portion includes the static labyrinth and the vestibular nerve. The central portion includes the vestibulo-cerebello-cerebral tracts and the cerebral center in the temporal lobe. The peripheral and not the central portion is more frequently involved in skull fractures.

The symptoms indicating injury of the peripheral portion of the vestibular apparatus are vertigo, spontaneous nystagmus toward the healthy side, past-pointing toward the diseased side, nausea, vomiting and disturbances of equilibrium. Tinnitus and deafness are usually associated. The patient prefers to lie upon the healthy side because the spontaneous nystagmus is toward that side. The vertigo is toward the diseased side. The vertigo is of slight duration and is annoying in the beginning. It gradually disappears completely or is only noticeable in stooping. Vertigo and nystagmus usually disappear after one year. Nystagmus was present in 25 per cent of the patients in the Breslau Sanitarium for accident cases. Rhesc in 1906 found a much higher percentage.

The Barany tests of the vestibular apparatus in the destructive type of lesion of the static labyrinth show an absence of response to the turning and caloric tests and if the vestibular nerve is involved the galvanic test will be absent on the affected side. A severe injury to the vestibular apparatus nearly always involves the

cochlear apparatus and usually total deafness on the affected side is present.

A comparison of the relative value of the roentgenologic and otologic aids in the diagnosis of basal skull fractures would be of interest. A positive roentgenologic diagnosis of skull fracture was made in 133 instances of which 105 were not subsequently confirmed by operation or necropsy and there was no roentgenographic evidence of skull fracture in 96 cases of which 17 were found at necropsy to have a skull fracture.<sup>8</sup>

Because of the great difficulty of detecting a fissure fracture of the skull and especially of the base roentgenologically we should in suitable cases add to our diagnostic armamentarium the function tests of the cochlear and vestibular nerves.

*Prognosis.* The mortality in 470 skull fractures was 35 per cent and 70 per cent of the fatal cases had involvement of the base. (Brun.) The mortality was 81 per cent in 547 cases. (Moody.) During the past 5 years the mortality at the Cook County Hospital was 36 per cent.<sup>18</sup> Murney<sup>3</sup> placed the mortality of fractures of the vault at 46 per cent and fractures of the base at 69 per cent. Phelps<sup>16</sup> found a 40 per cent mortality in 285 cases of basal skull fracture with hemorrhage from the ear. Blahd<sup>17</sup> reports a 33 per cent mortality in 59 skull fractures of which the mortality of fracture of the vault was but 13 per cent while in fracture of the base it was 65 per cent.

Von Bergmann's rule was that skull fractures that survive over 48 hours gave a favorable prognosis. At the Cook County Hospital 25 per cent of the skull fractures admitted die within the first 36 hours.<sup>18</sup>

The fatal cases of skull fracture may be divided into two groups. The vast majority belong to the group that succumb immediately as the result of intracranial hemorrhage, medullary compression, brain injury and shock; the remainder, a small minority, die from infection.

Skull fractures were complicated by meningitis in 8 per cent and by brain abscess in 1 per cent. (Brun.) 5 per cent of the meningitis cases were associated with a fracture of the base of the skull; of the latter, the anterior fossa was most often involved, implicating the ethmoid and frontal sinus. After these came fracture

of the temporal bone and lastly fracture through the roof of the sphenoid sinus. We may conclude that otitic meningitis caused by skull fracture is an infrequent occurrence and does not comprise more than 2 to 3 per cent of the cases of skull fracture. It is with this group that the otologist is immediately concerned. The prophylaxis of infection via the ear at the time of the injury is extremely important. It is a well established fact that a basal skull fracture with a fracture into the labyrinth in the presence of a middle ear suppuration is certain to result in a fatal meningitis. This is especially so in the chronic suppurative otitis media cases with fetid discharge, granulations, polypi or cholesteatoma. The provision of drainage early in these cases by means of a radical mastoid operation may be the means of preventing a fatal meningitis. The incidence of this type of cases must be comparatively small. I was unable to find in the literature any reference to the percentage of cases of basal skull fracture involving the temporal bone that were associated with a chronic suppurative otitis media.

Has the discharge of blood or cerebrospinal fluid from the ear any prognostic significance? The advantage is that it lessens the increased intracranial pressure which may be the immediate cause of death. It obviates the necessity for lumbar puncture in the cases with a discharges of cerebrospinal fluid from the ear. The disadvantage is that it predisposes to infection and to the suppurative intracranial complications. The hemorrhage *per se* may be so severe as to cause death. The mortality of 285 basal skull fractures with hemorrhage from the ear was 40 per cent.<sup>16</sup>

The prognosis considered from the viewpoint of morbidity concerns the otologist with regard to the disturbances of hearing and equilibrium and has to do with the future well being and working capacity of the individual. He may entirely recover or be partially or permanently incapacitated and unable to resume his former occupation or indeed any occupation. While the patient may improve in the course of time, otology cannot offer any material help in most of these cases. Complete recovery of hearing may occur in some cases of labyrinthine concussion, but permanent and total deafness, unilateral or bilateral usually results after fracture through

the labyrinth. In the Zurich clinic<sup>1</sup> it was found that both labyrinths were involved in basal skull fractures that recovered in 14 per cent of the cases. Vertigo is most marked at the onset and gradually diminishes until labyrinthine compensation has become completely established, when it ceases. In some of the cases of labyrinthine concussion with hemorrhage in the labyrinth and involving the cochlear nerve, there occurs a gradual but progressive loss of hearing associated with tinnitus which may continue until there is complete atrophy of the cochlear nerve.

The cases in which there is a basal skull fracture are often much better off than those with lesser injuries, because while they may be deaf in the injured ear they almost never complain of attacks of vertigo and tinnitus of labyrinthine origin.<sup>19</sup>

*Treatment.* In the consideration of the treatment of the otological complications of basal skull fractures, I wish to emphasize the importance of the prophylactic treatment with regard to the prevention of the otitic intracranial complications, especially meningitis. Otology can only offer aid in the immediate otologic complications of basal skull fractures in the role of prophylaxis; in the remote complications its curative powers are practically nil.

1. The treatment of hemorrhage or discharge of cerebrospinal fluid from the ear.

Of primary importance is the prevention of infection. Avoid getting any fluid into the ear, no syringing or installations. Keep the external canal clean by mopping with sterile cotton applicators moistened with alcohol. Never pack the canal. Apply a voluminous sterile dressing. Care must be exercised in washing or bathing not to get water into the ear canal. These cases are open or compound fractures and if infection can be prevented they may recover. By reason of their being compound, they have been provided with an avenue of escape for the increased intracranial pressure by means of a traumatic decompression.

In case the hemorrhage from the ear is severe and threatening its source should be investigated under the most rigid asepsis.

2. The treatment of basal skull fracture involving the temporal bone in the presence of middle ear suppuration.

One of the very few indications for surgical



interference in skull fractures is to prevent infection. In basal skull fractures accompanied by middle ear suppuration we have an additional danger to the patient in that we have the avenue of the fracture for the dissemination of the infection contained in the middle ear which may lead to the labyrinth with its intimate connection with the subarachnoid space resulting in the production of an acute diffuse suppurative leptomeningitis and death.

What has otology to offer as a prophylaxis against this? In the early or fulminating type of meningitis we are helpless, but in the late or delayed cases of meningitis we may be able to prevent a fatal meningitis by providing early prophylactic drainage of the middle ear suppuration. This applies especially to the cases of chronic suppurative otitis media with granulations, polypi or cholesteatoma, in which a radical mastoidectomy is indicated.

The indications for mastoidectomy should be broad and less exacting in the presence of a basal skull fracture than are ordinarily required. In the cases in which the middle ear becomes secondarily infected as the result of the basal skull fracture or was previously infected and in which there is stasis of the purulent discharge from the ear due to narrowing of the external canal, when acute mastoiditis develops, where the fracture extends through the mastoid cortex and involves the mastoid cells and antrum causing emphysema over the mastoid region or in which there is the slightest suspicion that middle ear infection is progressing toward the internal ear to involve the labyrinth and the meninges, a mastoidectomy should be done immediately.

We realize that a prophylactic mastoidectomy to provide for additional drainage of the middle ear suppuration subjects the patient to operative trauma, but it is the lesser of two evils, providing that the patient is in condition to stand the necessary operative interference.

It goes without saying that we must refrain from operating in the presence of shock or on moribund cases.

It is not necessary to employ general anesthesia in these cases as the mastoidectomy can be done without pain under local anesthesia.

No doubt it is true that prophylactic mastoidectomy will not prevent the development of meningitis in all of these cases, but if performed

early enough, it is the only ray of hope that otology has to offer.

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#### DISCUSSION

Dr. Howard C. Ballenger, Chicago: The time allotted me for discussion might be better spent in bringing out points in a paper recently published by Ulrich, in which he has a large series of cases of fracture of the base of the skull, involving the labyrinth. He evidently spent much time in getting this ready, and it seems quite comprehensive.

Ulrich states in all longitudinal fractures involving the pyramid, the capsule is never involved. However, the contents of the labyrinth may be involved. The facial canal, in injured, is in the region of the geniculate ganglion. The disturbance in the middle ear is in direct proportion to the force applied. In the longitudinal fractures the nerves of the internal ear are usually injured by hemorrhage. The order of frequency of the nerves injured was found by Ulrich to be as follows: Vestibular nerve, cochlear nerve and last, the facial nerve.

In the transverse fracture or fracture of the labyrinth the cochlear nerve is more vulnerable than the vestibular. In fracture of the labyrinth the fracture leads into the endolymph. In no case of fracture of the labyrinth has Ulrich found an impaired drum membrane. The infection of the meninges, when present from the internal ear, comes from compact bone with no callus formation.

The labyrinth fracture practically destroys the cochlear and vestibular nerve in nearly every case, and in about half the cases the facial nerve is destroyed. Which brings out the point that the location of the

fracture is not of as great importance as the question of increased intracranial pressure.

As to the question of a mastoid operation in fracture of the labyrinth with an infected middle ear, I do not know whether that would be wise or not. It might in a few selected cases, but in the average case, I think the shock would be too great.

Dr. Norval Pierce, Chicago: This was certainly a well-written and logical paper. I think it is very discouraging to a man who has gone to all the trouble Dr. Yerger has taken with this paper, to have it treated in this very offhand manner. I rise to discuss the point as to whether, in the presence of a chronic suppurative otitis media and skull fracture of the base, it is advisable to supply drainage to the suppurating area. First, I want to say that this is one of the fields in which there might be a good deal more cooperation between the general surgeon and the otolaryngologist. I should think it would be the rule in all general hospitals that where there is a fracture of the base of the skull, the otolaryngologist on the staff should be called in consultation always, because the general surgeon knows nothing whatever about otolaryngology and still less about operating in these conditions—that includes the very best general surgeons. The next point is, what can we get by an operation if there is a fracture of the basal skull in the presence of such an ear. There is no doubt but that within the first thirty-six hours an operation on the temporal bone, such a radical operation, should be very carefully considered before being attempted, especially in a patient that has suffered from such shock that recovery is not likely. In such a case I believe we should hold our hands off because there is no doubt that by operating we jeopardize the chance of recovery. But if the patient goes through the first thirty-six hours, and we know it is a chronic suppurative otitis media, I say then that in all probability we should resort to a radical operation, and I do not believe that radical operation will add materially to the danger of the patient but will undoubtedly remove to as large an extent as possible the danger of infecting the meninges from the focus of infection within the ear. It will not always guard against infection, but it will at least do all that is possible.

Dr. Harry Pollock, Chicago: I want to state that it is practically impossible to get the cooperation of the otolaryngologist and the general surgeon in these cases, except very rarely. The general surgeon, especially those who specialize in brain surgery, think they know all about the ear, and it is very difficult to get their cooperation. With regard to operation, we have had a number of cases at our little place, but we do have cooperation there. In fracture of the basal skull we are always called in for diagnosis, and we have had some very good results. We wait a little longer than thirty-six hours, providing the patient is getting along all right. It depends on the patient's condition at the end of thirty-six or forty-eight hours whether the operation is done or not. Of course, you should not wait until after meningitis develops, and I am in

favor of going in and doing what is called a radical operation. I have in mind one case—a teacher of lip reading. She had had a mastoid operation on her left ear fifteen years ago. She had a chronic suppurative otitis media in her right ear. She was struck by an automobile and brought to the hospital in a taxi. She was unconscious and we found a longitudinal fracture which was bleeding from the right ear—not the radically operated ear. In about six or eight hours she regained consciousness and the ear did not discharge any more than it had been. We thought we would wait for results. She got along all right and in a very short time made an uneventful recovery. This was one case which to me was almost miraculous. Here was a fracture of the base in the presence of chronic suppurative ear, and she did not develop a meningitis. I am in firm accord with Dr. Yerger when he stated that otitis media develops if the patient lives long enough. Where we have a history of an old ear with the fracture, I believe the patient should be given that chance, and it is in my opinion a great assistance in the recovery of the patient in these chronic suppurative ears. A large simple mastoid would get perfect drainage in the middle ear. Without it the patient may develop meningitis. I believe that with cooperation this should be done by the otolaryngologist and not the surgeon. The mortality lists would probably go down if this were done.

Dr. A. H. Andrews, Chicago: It is of course a matter of opinion as to whether a case of suppurative ear sustaining a skull fracture involving the ear should be operated on or not. If they are not operated upon we have no way of knowing how they might have gotten along had we operated. We do not know that an operation might have saved the patient, but I think it would be a pretty safe rule to lay down that when pus is confined, not necessarily under pressure, but confined, if it is a suppurative mastoid and the patient sustained a skull fracture, his chances for meningitis would be less if a rapid, skillful, careful mastoid operation were performed than if he were left alone. This is a matter of opinion, but if I had a suppurative ear and sustained a fracture of the skull involving the ear and my friends could get as skillful a man as Dr. Pierce to operate, I would want it to be done.

Dr. C. F. Yerger, Chicago (closing): I wish to thank those who have discussed my paper as my object in presenting it was to elicit discussion.

The otologist, as Dr. Pierce stated, is not often called in consultation in these cases. The general surgeon thinks the case is one for him alone, and while it has otological complications, still he feels that he is as well qualified to take care of these complications as a skilled otologist, which I think is a mistake. There are certainly a large number of skull fractures with otological complications, and in very few of these is the otologist consulted.

In the management of this class of cases with ear suppuration, if the patient dies, we think we have done the wrong thing. If we did not operate, we should



have done so; and if we did, we should not have done so. But the fact is, we are doing all we can for the patient in operating to prevent a meningitis.

With regard to the surgical treatment of these cases, no matter how large your experience or how well your judgment may be developed, it is often very hard to determine the correct procedure in every case. The patient should be given the benefit of the doubt, and I feel that it is the lesser of two evils to provide drainage in cases where a lack of drainage may cause intracranial complications, rather than to adopt the policy of watchful waiting and then have meningitis set in—it is then too late to do anything.

### TRAUMATIC GUMMA AND ITS RELATION TO COMPENSATION INSURANCE\*

J. P. HAHN, M.D.

GALESBURG, ILL.

In presenting this paper for your consideration, your essayist was prompted by the role of major importance which industrial surgery has assumed during the last decade. Also, the ever increasing demand on the part of the employer, the community, and the insurance companies, that the laborer be returned to his employment at the earliest possible moment and in the best condition available under the circumstances. All the larger casualty companies have attracted to their staff physicians, surgeons and specialists of unusual ability and have equipped them with every adjunct, enabling them to make proper diagnosis and supply the most efficient therapeutic remedies that their risks may reassume employment without dysfunction or deformity.

This is as it should be, but frequently cases occur which, while apparently trivial in their beginning, become mountainous before the end is reached. And it is this type of case which is apt to cause friction between the carriers of the risk and the doctor in charge.

The companies usually insert the question: "Has the patient any chronic disease not mentioned in this report?" and then leave the doctor to decide, without supplying him with the necessary measures to intelligently reply to the inquiry. If the company means—are there obvious infirmities?—the question might as well be abandoned. But if they really want to know the risk's probable reaction to injury, then they should direct the doctor to make whatever fur-

ther examinations are necessary to exclude such diseases as diabetes, cardiac insufficiencies, nephritides, tuberculosis, syphilis, etc. (which in not a few cases is of paramount importance), and recompense him a reasonable amount for the increased service. I do not mean to infer by this that they are not paying a suitable fee for services obtained, but I believe, a little more leeway, a little more confidence in the doctor, would result in a betterment of conditions for all concerned, and those most vitally concerned, arranged in the order of their importance, are:

1st. The patient.

2nd. The doctor.

3rd. The employer.

4th. The indemnifying company.

*The patient*, with his duties to his family, who depend upon his earning capacity, is certainly most vitally concerned in knowing what effect a trauma is likely to produce upon his *future* earning capacity, if complicated by a latent lues or other chronic disease, which might be lit up by a traumatic excitor.

*The doctor*, who renders a *personal* service, and is chagrined at an unsatisfactory convalescence, yet is more or less handicapped by the insurance company's efforts to keep the cost down, which limits him in his investigation for a probable cause, is certainly entitled to second place in this arrangement.

*The employer*, whose output of a commodity is threatened, and whose organization is more or less demoralized by the loss of efficient help, and his position in the business world placed in jeopardy—seems to properly belong in third place. And fourth and last comes

*The Indemnifying Company*. I do not intend to indicate that their interests should not be most assiduously guarded, and in fact, it is my belief that they are usually accorded *first* place by most of us, who do much industrial surgery. This might occasionally mitigate against all the parties of the ensemble, by omitting the necessary laboratory work, that the doctor would exercise in private cases, because the compensating companies have nowhere provided for this additional service without special permission and a considerable correspondence. However, their interest, in reality, is purely financial, and I have therefore placed them last.

While this paper may not produce anything especially new, if it brings about a closer co-op-

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eration between the doctor and the insurance company, which results in a betterment of service, the purpose of this paper will have been fulfilled. I want briefly to report three cases which have recently come under the observation of my associates and myself.

The first was a laborer, 42 years old, who received an injury to the plantar surface of the left big toe. A chronic ulcer developed, which showed no signs of healing in a month of varied treatment. No history of syphilis was obtained, but a Wassermann was taken, more out of desperation than anything else, as there was nothing about the wound to suggest a gumma aside from its chronicity—and the report returned four plus. Anti-luetic treatment was instituted and the wound healed rapidly.

The next was a carpenter, 53 years old. Past history was negative and he at first denied venereal infection. He presented complaining of an open sore on the top of his head. He said that about one year ago he bumped his head, cutting the scalp open and it became soft and "pussey." The opening never closed and the pus burrowed beneath the scalp. Examination showed a circular wound in the scalp about the size of a quarter at the junction of the frontal and sagittal sutures. The skull was exposed in this region and the outer table was necrotic and roughened. The scalp was loose for a distance of 2 or 3 inches in all directions. There was another opening in the forehead through which a probe passed easily to the first. Upon further questioning, he said he was told 15 years ago that he had bad blood and took some treatments in his arm. The Wassermann was four plus. Under specific therapy, he has much improved. There is very little drainage, but the bone deficiency has not filled in. He is still being treated.

The third and last case was a laborer about 47 years old, who was working, lying on his stomach. On raising himself up, he struck his back against a pipe. The immediate injury was trivial, but a large abscess developed. Although it was given free drainage, the process continued and ultimately eroded its way into the spinal column. At first, symptoms of a transverse myelitis appeared, later meningitis and finally death. A Wassermann taken about two months before the end was four plus and the patient was started on anti-luetic treatment, but the condition had already involved the cord. The time from the injury to the fatal termination covered a period of seven months.

I had hoped to be able to present a case of ununited fracture in the presence of syphilis, but my evidence is insufficient at this time to be dogmatic about it. That this condition does arise is highly probable. During my scholastic training, I was taught that the administration of thyroid was beneficial in delayed union of fractures. Up until Thyroxin appeared on the market, all

the so-called thyroid extracts in this country were dried gland products and contained a considerable amount of iodine. My suggestion is that where these preparations were valuable in fractures, their success may have been due to the effect of the iodine upon an unidentified but coincidental syphilis.

Referring back now to the cases presented: All gave a history of trauma as the exciting factor. No compensation was involved in the first two, as far as I know, but it can be readily understood how there might well have been. In the third case the employer carried accident insurance for all of his employees. Let me say in behalf of the insurance company that they were willing to settle on the terms of the family, who asked for hospital, doctor and burial expenses. The local doctor for the insurance company, however, asked them to carry the case before the Compensation Commission on the basis that the patient died from syphilis rather than from the admittedly trivial and possibly doubtful injury. The case has not come up as yet, but I stated an hypothetical instance similar to this one to one of the arbitors. His unofficial opinion was that if the trauma could be proven, then compensation would be allowed.

To summarize this paper:

1. We should suspect syphilis in all cases of trauma which show an indisposition to heal out of proportion to the extent of the injury.
2. If insurance companies really wish to know whether their risks have some chronic disease which might influence the prognosis, they should instruct the doctor to make adequate investigation at their expense.
3. Some cases of ununited fractures which have been benefited by the administration of thyroid may have owed their success to the effect of the contained iodine upon a coincidental syphilis.
4. Lastly: Pre-existing syphilis should not mitigate insurance liability where trauma is the exciting factor.

#### DISCUSSION

Dr. S. H. Easton, Peorio: It is a pleasure to discuss a value paper like this, first of all because it emphasizes a lot of things which we all should keep in mind; second, because since the development of social legislation compensation laws are coming more and more to the foreground. Industries are demanding



more and more attention to the injuries that the doctor has pointed out.

It seems to me in discussing the development of gumma there are two main fields, one is the development of a gumma at the site of a trauma, and the other is the possibility that it was there before the trauma. The second case is fully covered by the compensation laws. The changes in a gumma due to trauma are aggravations of the gumma and are covered. The chief point, as the doctor pointed out, is the diagnosis. I thoroughly agree with the doctor in that. It seems to me there are few distinct cases where a gumma does develop at the site of the trauma. I think cases, such as one where a gumma developed after a man injured his ankle and later a Charcot knee appeared, are not compensable because Charcot joints are neurological conditions. The lesion is not at the site of the injury. The second point is that the gumma must come within a reasonable time, and the third point is, if the interval is at all long and if there is wound healing and breaking down with the gumma developing later, there must be some bridging symptoms. I apply the same points to the development of sarcoma. It must be developed within a reasonable time, at the site of injury, and there must be some bridging symptoms. The best case of gumma following trauma that I ever heard of was in the practice of a nose and throat specialist who had performed a tonsillectomy. The tonsillectomy healed normally. There was the natural amount of swelling in the soft tissues of the palate. One month later, in the palate, a gumma developed, which healed under antisyphilitic treatment. That I think was a true gumma, developing out of the trauma of a tonsillectomy.

Ununited fracture I believe is a little over-estimated in regard to syphilis. It has been my experience that syphilitic fractures heal with the same rapidity and a little more callus than the normal. Still there are undoubtedly cases where the x-ray will show a rarefaction of the bone at the time of the fracture which you must consider as pathologic. In this case I think the condition is compensable and that the company should be responsible for the antisyphilitic treatment needed for healing.

I would like to emphasize this point, that where a condition like this is suspected, it is important that the injury should be reported promptly. Prompt diagnosis and prompt reporting of the injury will help out a man in getting just compensation in the long run.

Dr. B. G. Baird, Galesburg: As a rule I think the experience of most of us has been quite satisfactory with the insurance companies. They seem to be very willing to meet us half way. There are some things which arise in the course of industrial surgery which should be arranged for between the doctor and the company; in other words, we should attempt to inform the industrial insurance companies as to what is the proper and correct treatment in the cases which they are carrying. Now, for instance, a case recently occurred to us; a man came in with some symptoms of cerebral tumor. The Wassermann was 4 plus.

After carefully going into the man's history and being able to observe him we discovered that he was an epileptic. We found from inquiries from fellow workmen that there were times when he would temporarily lose consciousness and lean against the side of the machine. Obviously that man was unfit to be employed in that dangerous situation and still he carried insurance guaranteeing him against loss of time in case he does get hurt. He is suffering from a disease which should release him from insurance. Compensation insurance is the greatest thing that has ever been introduced for the working man. It is still in its infancy. And is a thing that can be worked out if the insurance company's doctors would get together. One frequently hears doctors raving about insurance companies being so unfair, but I think it is mostly because of a misunderstanding. If syphilitic conditions should arise and should require treatment, I think the insurance company should be ready to meet them at least halfway.

I think Dr. Hahn's paper is timely in view of the fact that there is so much industrial surgery being done, and that the conditions that are likely to cause trouble between doctor and patient should be talked over.

Dr. J. P. Hahn, Galesburg (closing discussion): Dr. Easton has pointed out that there is a question about the time and the location of the injury. It is true that the laboring man is often smart enough when he develops gumma to say he had a trauma. The proving of the trauma is the vital thing from the standpoint of the allowing of the compensation. This does not directly concern the doctor as he has to take the patient's word for it. As for the doctor's point concerning the lapse of time between the date of the injury and the appearance of the gumma—I refer only to those cases where there has been a lesion from the beginning. I agree with Dr. Baird that the Insurance Companies are willing to meet us more than half way.

We also wonder often as to whether we should give the information in cases which we know have syphilis, where the patient has been under our observation as a private client. According to the State law venereal disease is a secret and we are only obliged to report it to the proper authorities. I believe that the doctor if he is serving the patient, is justified or even obligated to refrain from volunteering such information. If he is employed by an industrial company, then his duty is to them.

#### UNITED WE STAND

An old negro preacher was making a visit at the revenue warehouse.

Revenue Officer: "What'll it be, Erasmus?"

Erasmus: "Ah wants some sacrilegious wine."

Revenue Officer: "Some sacrilegious wine? You mean sacramental wine, don't you? And what kind do you want?"

Erasmus: "Well, boss, at last Sunday's meetin' the congregation took a vote, and it was unanimous for gin."—*Exchange*.

## MUMPS OF THE LACHRYMAL GLANDS\*

JAMES E. LEBENSOHN, M. D., F. A. C. S.

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CHICAGO

Mumps is a systemic disease, which, though typically associated with parotitis, may produce localized phenomena elsewhere, with or without a co-existing affection of the salivary glands. Orchitis, mastitis, pancreatitis, arthritis, encephalitis, meningitis and ocular affections are among the complications at times encountered. That the orchitis of mumps may occur in the absence of parotid gland involvement has been definitely established; and recently Tasker<sup>1</sup> has demonstrated that the meningo-encephalitis of mumps may likewise occur independently, and as the only manifestation of the disease.

The ocular complications of mumps may be very serious. The diagnosis is oftentimes puzzling, for not only is the involvement of the eye in mumps uncommon, but the relationship to the disease may be by no means apparent. If the eye becomes affected, it is generally at a time when the usual symptoms of mumps have begun to subside, that is, at the beginning of convalescence or within a few weeks subsequent to the attack.

The first recorded observation of ocular involvement in mumps was made in 1872 by E. Ryder, who reported two cases of dacryoadenitis. This was followed in 1876 by a report of Hatry of 10 instances of neuro-retinitis.<sup>2</sup> Since then other ocular complications have been noted. In a resume of the literature in 1894, J. H. Woodward<sup>3</sup> collected 23 cases of neuro-retinitis, 14 of dacryoadenitis, 6 of optic atrophy, 6 of iritis, 3 of retrobulbar neuritis, 3 of paralysis of the intrinsic or extrinsic ocular muscles, and 2 of keratitis.

The lachrymal gland involvement in mumps, like that of the parotid, is bilateral, and almost never suppurative. The palpebral portion of the gland is that most affected. The process begins acutely with pain, redness, and swelling of the outer extremity of the upper lid and conjunctiva. The upper lid droops, the gland is very sensitive; the enlargement is readily felt and

the skin overlying the mass is freely movable. On elevating the lid the lower part of the swollen gland becomes visible, but eversion of the lid is quite painful.

Bilateral dacryoadenitis is quite rare, and outside of mumps may be caused by influenza, rheumatism, small pox, and leukemia. Metastatic dacryoadenitis in gonorrheal patients has been described.<sup>4</sup> Tuberculosis and syphilis may affect the glands but only exceptionally.

Unilateral dacryoadenitis occurs more commonly than the bilateral forms, and may follow injury or be secondary to diseases of the con-

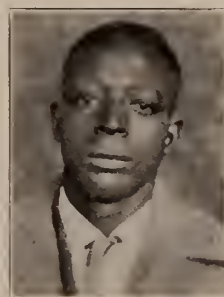


Fig. 1. Photograph taken during resolution. The scar in the right eyebrow shows where the incision was made for the removal of a bit of lachrymal gland tissue.

Note the ptosis and the swelling in the upper lids.

junctiva or cornea.

Mikulicz' disease must be considered in this connection. In this affection there are bilateral lymphomata of the lachrymal, parotid, and submaxillary glands. No pain is present, no derangement of function, and no demonstrable systemic disturbance.

Though the majority of patients with mumps are between 5 and 15, there is no immunity with advancing years, but merely a diminished susceptibility. Individuals of 60 and 70 have been affected.

*Case Report.* A male negro, stockyards worker, aged 26 years, reported to the Illinois Charitable Eye & Ear Infirmary for a painful swelling in both upper lids of two weeks duration (note photograph). The palpebral portion of both lachrymal glands was markedly enlarge and indurated. The tissue about the ducts was palpable as discrete nodules. His general health was otherwise excellent. He remembered no recent diseases, such as mumps, influenza, or other systemic disturbance. The blood Wassermann taken previously had been found negative. The test was repeated with a similar result. The blood count was normal. Vision was 20/20 in each eye, and the media and fundi showed no pathology. A bit of tissue from the right lachrymal

\*Read before Section on Eye, Ear, Nose and Throat, Illinois State Medical Society, Champaign, May 19, 1926.



gland removed under local anesthesia revealed but a simple inflammatory reaction.

As possible causes of this condition, influenza, rheumatism, gonorrhea, leukemia, smallpox, syphilis, tuberculosis and Mikulicz' diseases were considered and ruled out. The presumptive diagnosis became narrowed down to mumps. That the patient did not remember ever having had mumps previously supported this view rather than otherwise. The patient did not know of being in contact with anyone that had mumps; but this can be readily understood, as the disease is communicable from the incubation period up to six weeks after symptoms have disappeared.

The treatment consisted of iodine-petrogen applied locally, hot compresses, potassium iodide internally, mercury rubs, and daily catharsis with sodium phosphate. After three weeks of this management, the swelling almost entirely disappeared, and the patient was discharged from treatment.

25 E. Washington St.

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#### DISCUSSION

Dr. F. L. Alloway, Champaign: A man I know in this district came in to see me and said he was going up to Mayos, that he had cancer; he had a large swelling around the eye. Frankly, I never had seen a case of mumps of the lachrymal gland and did not recognize the condition. However, I persuaded him to wait a few days before going to Mayos, and I talked to his wife about the condition. She said it came on just after the child had had the mumps. He waited for a while, and the swelling went down, though there is still a little puffiness in that region, and I think now it was a case of mumps of the lachrymal gland, and since talking with Dr. Lebensohn I think I am right. It is apparently a rare disease in the literature, though I think it is sometimes overlooked, and I think such cancer cases on their way to Mayos should be looked over.

Dr. Lebensohn (closing): I appreciate Dr. Alloway's interest in this case. I believe these cases are not always recognized, as several physicians have told me on personal discussion that they have had similar cases to this. Dr. Alloway asked the Pryor Service to look up the literature and found a few contributions that I had missed; but altogether the number of cases reported have been quite few.

#### THE BUSINESS VIEWPOINT

A man went into Cohen's book store and asked: "Have you a copy of Who's Who and What's What, by Jerome K. Jerome?"

Cohen replied: "No, sir, but we got Who's He and Vat's He Got, by Bradstreet."

## TWO YEARS' OBSERVATION OF THE FUNDUS OCCULI IN TRYPARSAMIDE TREATMENT OF GENERAL PARAL- YSIS OF THE INSANE\*

J. H. ROTH, A. B., M. S., M. D.

KANKAKEE, ILL.

Last year at this section we had the pleasure of making a preliminary report of the ocular findings in tryparsamide treatment of general paralysis of the insane at the Kankakee State Hospital. We are delighted to have the privilege of reviewing the ocular findings and conclusions reached in the treatment of neurosyphilis with tryparsamide covering a period of nearly two years. We hope that you will bear with us if we briefly review some of the remarks made last year in regard to tryparsamide and its action.<sup>1</sup>

Tryparsamide is a pentavalent arsenical closely related to atoxyl and arsacatin and belonging structurally to that group which seems to have an especial affinity for the optic tract. It was first synthesized by Jacobs and Heidelberger<sup>2</sup> and its biological action studied by Brown and Pearce at the Rockefeller Institute in 1915. The first publication appeared in 1919. This drug was first used in the treatment of trypanosomiasis—hence the name: this work was reported by Pearce in 1921.<sup>3</sup> In 1923 Lorenz, Loevenhart, Bleckwenn and Hodges<sup>4</sup> reported findings in the treatment of neurosyphilis.

Tryparsamide is peculiar in the fact that its therapeutic index is low and if it were to be judged by its spirocheticidal action it could not be given serious consideration, as its index is from one-fourth to one-third that of arsphenadine and neoarsphenamine. However, being a pentavalent arsenic compound its penetrability and excretion are much more rapid than that of the more commonly used arsenicals. It also is supposed to have the faculty of building up the resistance of the patient to the toxins of lues. In the earlier phases of syphilis when spirochetes are ranging in all parts of the body we must rely on a powerful spirocheticide. In the later stages of the infection when the spirochetes have become localized in the tissues of the body that are practically inaccessible to the ordinary spirocheticide we must rely on a drug with a high penetrability or one that will reinforce the patient's resistance or a combination of both actions. Mehrtens, Kalos and Marshall<sup>5</sup> found that nervous tissue was chemotropic to tryparsamide as compared to arsphenamine. Fordyce<sup>6</sup> and his colleagues believe that tryparsamide remains unchanged in the blood stream. Young and Muehlberger<sup>7</sup> have demonstrated unchanged tryparsamide in the urine. Factors such as these have recommended

\*Read before Section on Eye, Ear, Nose and Throat, Illinois State Medical Society, Champaign, May 19, 1926.

the drug as an aid in the treatment of neurosyphilis, especially general paralysis of the insane.

We have no authority to speak of the neurological results of tryparsamide in the courses of treatment of general paralysis at the State Hospital. These findings will be made public by the staff in due time. Our observations were by invitation and confined to the ocular findings. We feel that our experiences are of value to this section because we believe that many of the ophthalmologists are as ignorant of what to expect as we were when we began our observations. The fate of tryparsamide still lies with the neurologist and psychiatrist, and it is the duty of the ophthalmologists to aid in every way possible and still conserve the vision of the unfortunate neurosyphilide.

The patients whom most of the men here present will be called to see in consultation will be in the earlier stages of general paralysis. You will not be asked to observe the fundi of patients in the state of delapidation as is the rule in most of our state institutions and especially at Kankakee. The patients concerned in this report were absolutely hopeless in their deterioration. Realizing that the prognosis of the general condition was far from the best more liberties were taken with the visual tract than the consultant would be willing to risk in the earlier stages of the disease in private practice. With the exception of the optic atrophies whose vision was so markedly reduced that the slightest sacrifice of optic nerve tissue could not be considered, fundus pathology was practically disregarded as a contraindication to tryparsamide therapy. In fact more than fifty per cent of the patients under observation showed some luetic fundus pathology.

The controls used at the Kankakee State Hospital showed as many changes as the patients to whom tryparsamide was administered. These were not selected but were those remaining for whom permission could not be obtained from responsible parties to undergo the course of treatment.

From the experience gained last year we did not pay as much attention to the fundus findings as we did to the visual acuity and the perimetric fields. It is almost beyond the realm of human possibility to remember finer details of

the fundus from the week previously when the consultant has seen many fundi in the interium. Although regular fundus examinations were made very little information could be obtained with either the white light or the so-called red free light other than the already existing luetic lesions. Very many of the fundi were rendered blurred and indistinct on account of the lenticular, corneal and vitreous opacities. Lenticular and vitreous opacities are not uncommon on account of the age and the disease and corneal opacities on account of institution injuries and the patient's uncleanly habits.

All ophthalmologists are familiar with the wide range of syphilitic intraocular findings and the discouraging prognosis of so many of the lesions. One of the complications of general paralysis that must not be lost sight of is the atrophy of tabo paresis. We may have optic atrophy of varying degrees in both cerebrospinal syphilis and tabes, but our prognosis in tabetic optic atrophy is much more discouraging than in the former disease. Tabetic optic atrophy as such may be very difficult of diagnosis at the time because it makes its appearance often years before our diagnosis of tabes can be established. If such a condition should exist with all the clinical and laboratory findings pointing toward general paralysis the resulting blindness that would very probably result would most likely be attributed to the treatment rather than the disease. We still have the right to question the amblyopia and optic atrophies that have been reported as the results of mercury and arsenicals in treatment which may have occurred just as rapidly had the disease been untreated. One is surprised in the routine fundus examinations of the luetic inmates of institutions to find extensive lesions without the patient making any mention of the condition. Such has been our experience and on questioning the patient to find that he is totally ignorant of any disturbance of vision. Such conditions are not uncommon in the later stages of cerebrospinal lues. When the patient is still in a state that his reason and judgment is not so impaired he may acquaint us with such changes that may affect his vision. However, should such a condition escape the notice of the patient and be detected by the observer in the routine examination it would be more likely ascribed by the cau-



tious oculist to the treatment than as an incident to the disease.

Zimmerman<sup>8</sup> contends that differentiation between tabetic optic atrophy and atrophy due to cerebrospinal syphilis should be established to determine the course of the treatment. He maintains that the prognosis as far as results from treatment are concerned are more promising in the latter disease. He quotes Behr as recognizing three types of tabetic optic atrophy in which energetic antiluetic treatment are contraindicated.

1. Decrease of central vision and early loss of color vision with normal or nearly normal white fields.
2. Marked contraction for white and color fields with coinciding limits for white and colors with normal or nearly normal central vision.
3. Slight perimetric changes involving white rather than color fields with normal or nearly normal central vision with marked ophthalmoscopic changes of atrophy. Pronounced subjective visual disturbances.

These same findings may be watched with caution in our observation of tryparsamide therapy because of the possibilities of obscure tabetic optic atrophy or complication of tabes with general paralysis and upon the first alarming change remove the patient from the treatment.

On the other hand Fordyce holds that many cases which do not respond to ordinary routine treatment may show marked improvement under intraspinal therapy. However, he sounds a warning that he believes that it is poor judgment to use intravenous therapy in such cases without a complete knowledge of the spinal fluid. He has found that a tabetic with extensive field and good central vision is a much better risk than one with contracted fields and good central vision.

In the course this year twenty-one patients received tryparsamide. As we have stated, the deterioration of the patients was such that we disregarded ocular pathology in our efforts to institute treatment. Five of the patients were so unruly that we could not obtain even the vision. Two additional patients gave visions, but attention could not be held long enough for us to obtain the fields. In consequence we were only able to secure useful information in four-

teen cases, that is, combined fields, vision and fundus observation. Two patients had acute exacerbations before the final fields were taken, but at the last observation both fields and vision were improving. Of the fourteen fields observed six showed increase in form and corresponding colors, six the same and two decrease. The decrease in the fields and vision of the treated patients showed a loss of 14 per cent, while the controls or untreated cases showed a loss of 58 per cent. This figure does not correspond to the general findings in ocular loss in untreated neurosyphilis because this observation is really the final picture of this condition.

In six cases the central vision corresponded to the field findings. These had good central vision and fairly good peripheral fields at the beginning and the patients did not suffer any insult to the optic tract. In two cases the vision decreased while the fields increased. In both of these cases the central vision was impaired at the beginning. In three cases the vision improved slightly with no change in the fields. We considered central vision in these cases fairly good at the beginning, considering the fact that these patients had vitreous opacities. Two showed field decrease with vision the same, which is not anything unusual in neurosyphilis.

Of the patients observed over two years, one patient refused to undergo a second course of treatment after being removed from treatment, on account of ocular loss last year. Eleven patients either died or were transferred from the institution. Eight patients were observed over a period of two years. Most of these showed an early loss of field and central vision in the first course but gradually regained their loss and in five cases showed an actual increase in both field and vision over the two-year period. The patients observed over one year showed early loss of field and vision, but soon regained both the field and vision or gave promise of improvement. This early loss of visual function may be due to the exacerbations we frequently encounter in general paralysis or to an accumulative effect of the drug. Fordyce<sup>9</sup> and his colleagues have shown that some patients are not able to excrete arsenical compounds as rapidly as we are led to suppose they should. With a drug whose penetrability is as great as is ascribed to tryparsamide we may expect such an accident. We believe

these patients may be removed from treatment and by strenuous elimination be returned to treatment in a few weeks, without any ill effects from the drug.

The loss of fields and vision in the untreated cases or controls was more rapid and marked than in the treated cases. Some of the fields of the untreated patients passed from good peripherals to dangerous limits in a few weeks' time while their vision was correspondingly decreased. One patient showed rapid loss of fields and vision last year, but did not show any loss this year. Two had very marked increase in fields over the two-year period, central vision remaining the same. One case showed a really remarkable increase in one year's time.

There were no cases resulting in blindness from tryparsamide at the Kankakee State Hospital. The case last year whose loss necessitated removal from treatment regained his vision and a large proportion of his contracted fields and if he would submit to treatment again we believe that he would suffer no impairment of visual function.

Our findings do not entirely correspond with the findings in some of the reports from other institutions. Cocke<sup>10</sup> did not observe any ill effects from the use of the drug. Dancy<sup>11</sup> reported 9 cases with some fundus findings but only one case with a definitely reduced finding in the end. Lorenz<sup>12</sup> and his co-workers found visual disturbance in 7 per cent of the total number treated, which is considerably less loss than we found. However, their tabetics and taboparetics suffered to the extent of 23 per cent. Thirteen cases showed amblyopia and all but one cleared up and resumed treatment. Lillie<sup>13</sup> reports that changes in the vision, fundi and fields were greater in untreated cases of syphilis of the central nervous system than in those treated with tryparsamide. Pupillary and reflex changes were practically the same in both cases, while the ocular changes were about the same. He believes that tryparsamide is not contraindicated in pathological changes of the fundus. Bluemel<sup>14</sup> had four cases in his group who suffered visual disturbances virtually amounting to blindness. Stokes and Wilhelm<sup>15</sup> observed 152 cases over eighteen months and came to the conclusion that tryparsamide on account of the ocular complication should be used as a last

rather than an early resort in asymptomatic neurosyphilis.

We believe that tryparsamide can be used in neurosyphilis without injury to the optic tract, providing a competent ophthalmologist is able to observe the patients regularly. While the fundus examination with the ophthalmoscope with both the white and the so-called red free light is interesting and may at times give us very valuable information it cannot be used to the exclusion of the other means at hand. The fields and central vision perhaps give us our best information. Occasionally the patient will complain of shimmering and fogged vision but this usually comes early in the course, and if there is a corresponding loss of central vision and fields the patient should be removed from treatment for a short time. Later he may resume treatment with no ill effects. Our observations were that patients with good central vision and even moderately contracted fields did not suffer any insult to the visual tract. However, those whose central vision was not good, discounting, of course, opacities of the media and choroiditis, but with extensive fields suffered losses that were not regained. Patients whose deterioration is such that cooperation is not obtainable are hazardous in our opinion. If tryparsamide should prove of more value in the treatment of general paralysis than any of the other drugs now at our disposal we believe that it should not be condemned on account of the dangers of injury to the optic tract as long as we have trained ophthalmologists to follow the progress.

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### DISCUSSION

Dr. Oscar B. Nugent, Chicago: Dr. Roth's paper is very interesting from the standpoint of the syphilologist as well as that of the ophthalmologist. Let us review the pathology as given by Beattie and Dickson of Liverpool and London in their 1926 edition:

This disease is now regarded as a late manifestation of syphilis. *Spirochaete pallida* has been demonstrated in the lesions, and the Wassermann reaction is usually positive with the cerebro-spinal fluid. In the chronic stage there is thickening of the membranes, with degeneration and atrophy of brain-substance. On section the brain is usually edematous, and the lateral ventricles dilated. On microscopical examination the nerve cells are found to be especially affected. The nucleus and the granules disappear and the cell body undergoes atrophy. The myelin-sheath of the white fibres becomes more or less disintegrated and a neuroglial proliferation with increase of the nuclei takes place. All these changes are best seen in the cortex, but may also be found in the basal ganglia, pons and medulla.

Tryparsamide has a low therapeutic index, about one-third that of other arsenical drugs, and therefore its penetrative power is greater. It is supposed to have a less accumulative power. Its use in acute syphilis is not recommended because of its low therapeutic action. It is not changed in the blood stream and is carried to the nerve tissues in an unchanged state. It seems to have a faculty of attacking the optic tract and other nervous tissues such as the basal and cortical tissues of the brain, making it an apparently useful drug in the treatment of general paralysis of the insane where so much nervous tissue is involved. A study of the literature shows that the drug is not without danger, and that its use must be attended by certain precautionary measures, carefully guarding the size of the dose, using the drug only where there is an ophthalmologist available to watch the ocular findings, making it possible to know when to discontinue the treatment, should such findings warrant it. I believe the drug is not condemned so much in the more modern literature as by the early writers and observers. Bluemel and Greig, however, in the January, 1925, issue of *Colorado Medicine*, said: "For ourselves we would appraise it as a form of therapeutic dynamite, notable chiefly for its dangers." In the more recent articles we are able to find a more balanced opinion concerning its therapeutic value. In using the drug in a class of patients suffering with general paralysis, as Dr. Roth has had, we must remember that to record definite ocular findings at all times is impossible, and if we could rely on fundus findings alone our task would not be so often defeated, but this cannot be relied upon, so central vision and the proper recording of the fields must be made at regular intervals. This is difficult, for we are dealing at times with a more or less demented patient, whose fields are difficult to obtain because of a lack of helpful cooperation on the part of the patient. It is of interest to note the excellent results obtained by Dr. Roth in some of his

cases and he is to be congratulated on securing them under adverse conditions in patients from whom we could expect disastrous results rather than beneficial ones.

Dr. C. H. Yerger, Chicago: This paper should not be permitted to go without discussion in view of the fact that Dr. Roth has had a wonderful opportunity to demonstrate the co-relationship between the advantages of the ophthalmologist and neurologist in the treatment of neurosyphilis. This study has extended over a period of several years, and is a distinct contribution to this department of medical science.

Dr. Julius Grinker, Chicago: This is a most optimistic paper. Dr. Roth has had an opportunity to observe his cases and knows what he is talking about. However, those of us who have tried tryparsamide in private cannot see the subject in the same way, especially when we hear of cases without optic atrophy before its use, which are followed by optic atrophy after its use.

Unless one can place the patient under the constant observation of a competent ophthalmologist, which, of course, is not possible in every case, I think the general practitioner had better leave tryparsamide alone. Shortly after the release of tryparsamide I tried it on five private patients. One developed optic atrophy and another had blurring of vision, which made me discontinue it in these cases. I believe the intra-spinous treatment is preferable for the reason that optic atrophy need not be feared. I think the malarial treatment is best of all. I saw many improved paretics in Vienna and Prof. Wagner showed me the records of these patients before treatment which convinced me that we have a wonderful remedy in the malarial treatment.

Dr. Roth has also seen a number of cases treated with tryparsamide, in which there was optic atrophy and other visual disturbance; but I have yet to hear of such complications from the cases treated by malaria. I think the general practitioner will do well to ignore the existence of tryparsamide altogether.

Dr. Harry Pollock, Chicago: I attended a meeting of the Chicago Neurological Society when this treatment was brought up and all the neurologists spoke as Dr. Grinker did today. They warned one another of the evil effects on the optic nerve, but with one exception they did not have the cooperation of a trained ophthalmologist. One man stated he would rather let his patients die without the use of it than have them develop blindness. In one case I have reference to, the patient, after three injections of tryparsamide, began to get dimming of vision, not central, but a closing down of the fields, and the treatment was stopped for a week or two; the third course was resumed without any ill effect. I think we can depend on what Dr. Roth tells us rather than the neurologists who do not have a trained ophthalmologist to examine the case. As Dr. Roth states, some optic atrophy occurs even when you do not use tryparsamide. I think the great trouble has been that they do not have a trained ophthalmologist to cooperate with them and depend upon the patient's statement that vision is getting

worse. It is only through cooperation that you get anywhere in these cases, where you depend upon the patient instead of the ophthalmologist.

Dr. J. H. Roth, Kankakee, Ill. (closing): I might say that so far as tryparsamide is concerned, it will be discontinued at the State Hospital because of the not quite satisfactory results, and malarial treatment may be instituted instead. However, I believe that a good many cases of optic atrophy are due to not thorough enough following up by the ophthalmologist—examination made simply with the ophthalmoscope, or perhaps more or less carelessly taken fields. In the paper presented last year I gave some figures of Fordyce's in which he showed that many patients retained a large amount of the drug in the blood stream after being given three or four injections and as a result they got an overdose which resulted in optic atrophy. After they were taken off the treatment they usually recovered their vision fairly well without any permanent loss. I want to thank Dr. Yerger for his kind remarks.

#### THE PRESENT STATUS OF THE TREATMENT OF SEXUAL IMPOTENCE

Vecki (*Urologic and Cutaneous Review*, September, 1926) quotes Voronoff to the effect that senility is frequently worse than death, that we must not fight against death, but senility. Senility is regarded by the writer as almost synonymous with sexual impotence. It is held that premature sexual impotence surely shortens the span of life. A stallion lives longer than a gelding; no eunuch lives over sixty years.

It is maintained that no organ in the body of man can preserve the vital energy, nor can the cells properly function, unless it is stimulated by the testicular hormones. If the genital glands remain active in old age senility will be retarded. Next to age the most frequent causes of sexual impotence are the various congenital conditions of hypo- and hyper-functioning glands of internal secretion. Every debilitating bodily condition, however, impairs sexual power. Thus it is lessened or abolished in diabetes or autointoxication, arteriosclerosis, overfeeding, improper nourishment, alcoholism, overwork, worry, and sedentary habits. It is held that the study of internal secretions has done for sexual organs almost as much as antitoxin has done for diphtheria. A thorough examination of every patient is absolutely necessary. At times the simple use of some internal remedy is sufficient. So-called aphrodisiacs are helpful, iron and arsenic are at times useful, strychnine in full doses is regarded as a highly serviceable drug. Phosphorus is indicated in conditions of phosphaturia; atropine has had its best results in cases of prostatorrhoea. If combined with a purgative such as jalap, rhubarb, aloes, or particularly podophyllin, it has had surprisingly good results in cases of autointoxication. Morphine and other opiates are helpful in psychotic conditions. Novocaine in the form of an instillation to the meatus sometimes influences favorably premature ejaculation. Valerian is used and with profit. Bro-

mides usually do harm. Alcohol is indicated in cases of frigidity and is indispensable in premature ejaculation. No matter what drug may be used the simultaneous feeding of desiccated glands of internal secretion is indicated. Either the thyroid alone or in combination with the suprarenal, the pituitary, the gonads and hemoglobin give invariably good results. Small doses should be used over a long period. Physicians, as well as manufacturers, must consider that when, for instance, the pituitary gland is used for impotency, it should not be from a castrated animal.

In cases resisting internal opotherapy, intramuscular and intravenous injections are next to be applied. Very good results are obtained from injections of orchitic preparations. We know that the internal secretion of the testis controls calcium metabolism and exercises a stimulating influence on the exchange of protein substance.

The best results are being obtained by real transplantation after the method of Voronoff and using his technique. Only human glands or those of anthropoid apes can be used, and the difficulties of obtaining them are usually insurmountable.

Properly performed vasoligation, whenever indicated, is a very useful operation, and in some cases of premature ejaculation, the supreme remedy.

Sexual impotence is frequently caused by a faulty sexual life, but long forgotten masturbation is invariably being accused, when it has absolutely nothing to do with the condition.

Abstinence and neurasthenia go hand in hand and support each other. Sexual power cannot be banked like money, and it is an old experience that non-use leads to weakness.

A clean intestinal tract is of the utmost importance. Proper exercise without fatigue, proper amount of sleep, congenial occupation, amusements and general cheer are essential.

## Society Proceedings

### Adams County

February 14, 1927. The meeting of the society was preceded by a dinner in honor of our guest, Dr. Elsworth S. Smith, Prof. of Clinical Medicine, Washington University Medical School, St. Louis. This was held at the Quincy Elks' Club and there were 24 present. At the conclusion of the dinner Captain Murphy, Inf. U. S. Army, addressed the physicians present on the physical examinations for candidates for the Citizens' Training Camp, to be held this summer.

The President called the regular meeting to order at 8:25 p. m. There was a total attendance of 41.

Dr. John A. Koch read a report of the meeting of Fracture Committee of the American College of Surgeons. This committee had a meeting in Chicago last month, which Dr. Koch attended. The report was discussed by Drs. Williams, Beirne, Center, Baker, and finally closed by Dr. Koch.

Dr. Elsworth S. Smith read a very scholarly paper



on "The Prognosis and Treatment of Cardio Vascular Renal Disease," which was illustrated by lantern slides. The paper was discussed in a very able manner by Drs. Nickerson, Koch, R. Mercer, Center, Beirne and closed by Dr. Smith. Dr. E. B. Montgomery read a short paper on the Salicylates, which was discussed by Drs. Smith and Center.

The Secretary read letters from Drs. O. C. Church and J. H. Mitchell announcing their resignation from the society. Dr. Koch made a motion that the Board of Censors interview these members and try to interest them to retain their membership in the society. Seconded and carried. The Secretary read a letter received from the Trade and Labor Assembly to the effect that the society withdraw their opposition to the Venereal Clinic in order that it may be reestablished. The matter was referred to the Public Health Committee for their consideration. A letter was read from the Educational Committee of the Illinois State Medical Society urging the society to help educate the public to the value of Toxin—Anti-toxin in the eradication of diphtheria. The Secretary read an editorial from the *Journal of the Missouri State Medical Association* telling of the educational work that had been done in Holt County, Missouri, toward eradication of diphtheria. The matter of educational work in diphtheria was referred to the Public Health Committee for a report at the next meeting of the society. Dr. Cohen spoke on the value of establishing a committee of some kind to take care of the routine business of the society. The President appointed a committee of three to investigate this matter and to report at the next meeting of the society. (Committee: Drs. Cohen, Stevenson and Center.) A rising vote of thanks was extended to Dr. Smith for addressing the society and he was elected an Honorary Member of the Adams County Medical Society. Dr. Stevenson called the attention of the members to the private car that was being chartered to take the members to the State meeting in Moline next May and said that if a few more members wished to take the trip a second car would be secured, inasmuch as the reservations for the first car were already over-subscribed. The Secretary invited the membership to adjourn to his home for an informal reception in honor of Dr. Smith.

The meeting adjourned about 11:00 p. m.

HAROLD SWANBERG, M.D., Secretary.

### Christian County

February 27, 1927.

On the evening of Wednesday, Feb. 23, the Christian County Medical Society met in semi-annual session at the country club of Taylorville where nearly half of the physicians of this county sat down to a good dinner and had a real social time for an hour or more after which the business of the meeting was taken up and the first was the election of officers for this year, and the result of this election was: President, Dr. Dana M. Littlejohn of Pana; vice-president, Dr. G. C. Klein of Taylorville; sec-

retary-treasurer, Dr. D. D. Barr of Taylorville; delegate and alternate, Drs. Armstrong and Lawler of Taylorville. All the rest of the old officers were reelected except that Dr. J. F. Miller of Palmer was elected to the public health committee instead of Dr. J. H. Miller of Pana who is retiring and away from home a good deal.

Dr. Ben F. Zobrest of Assumption was elected to membership.

Dr. Neil Moore of St. Louis University was the speaker of the evening and his subject was: "Affections of the Upper Urinary Tract." The address was excellent and well illustrated with numerous lantern slides that showed many interesting pathological conditions and the doctor told of the treatment. All voted the doctor's address excellent, and we wish him to return at another time.

D. D. BARR, Secretary.

### Cook County

#### CHICAGO MEDICAL SOCIETY

*Joint Meeting, Chicago Medical Society and the Northwest Branch, Feb. 2, 1927*

Some Causes and the Treatment of Chronic Diarrhea ..... William A. Brams  
Discussed by: C. S. Williamson, C. A. Elliott, Karl Meyer, James G. Carr.

*Regular Meeting, Feb. 9, 1927*

1. The Present Status of Roentgen Diagnosis in Pregnancy. Lantern Slide Demonstration.... Irving F. Stein  
Discussion ..... D. A. Horner
2. Chronic Non-Ulcerative Colitis.....  
..... Chas. E. Stewart, Battle Creek, Michigan  
Discussion... A. A. Goldsmith, L. C. Gatewood

*Regular Meeting, Feb. 16, 1927*

1. An Operation for Sterility in the Male (Lantern Slides) ..... Harry C. Rolnick  
Discussion..... Charles Morgan McKenna
2. Obesity ..... L. H. Newburgh  
University of Michigan, Ann Arbor, Mich.  
Discussion—James H. Hutton, Prof. A. J. Carlson, University of Chicago.

*Joint Meeting Chicago Medical and Chicago Ophthalmological Societies, Feb. 23, 1927*

1. Lantern Slide Exhibition of Photographs of the Fundus  
(a) Variations in normal fundi  
(b) Pathological fundi and their relationship to general diseases..... Robert Von der Heydt  
Discussion opened by Theodore Ticken.
2. The Eye in Brain Localization.. Frank Brawley  
Discussion opened by John Favill.
3. Lantern Slide Exhibition of External Eye Disease of Interest to the General Practitioner ..... E. R. Crossley  
Discussion ..... Joseph L. Miller  
Problems in Bronchoscopy.... George W. Boot

### Franklin County

The regular monthly meeting of the Franklin County Medical Society held January 27, in the of-

fice of Drs. Moore, First National Bank Bldg., Benton, was one of the most important ever held by the society. Dr. Emmett Keating of Chicago discussed with the members and their guests the question of "Periodic Health Examinations," one of the most important questions ever considered by the profession in its relationship to the laity.

It has been demonstrated beyond any exaggeration that the insidious diseases that carry off individuals in the prime of their life, could have been eradicated, or at least kept within bounds, had a diagnosis been made when the disease first started. The only possible way this can be done, is for a thorough examination to be made at definite times by men who are competent to do the work.

The medical profession since the beginning of time have been so afraid that they would attempt any savoring of advertising, that they have gone to the extreme and allowed men and women to become victims of quacks, simply because they did not know any better. The idea of "Periodic Health Examination" is to prolong lives, and put up the right sort of fight against the diseases, such as Bright's Disease, tuberculosis, cancer and the various forms of heart conditions that have been causing a high mortality in mature men and women.

Dr. Keating also discussed with the Society the method of making these examinations, and the proper means of keeping the records, so that they might be available at any future time, particularly for the definite time set for the next examination which might be six months or a year, depending entirely upon the opinion of the man who keeps the record. When a patient pays a physician for his services, he is not paying for a prescription or a small bottle of medicine that the physician prescribes, but a reimbursement for his time and care given this examination, and for council and advice, a thing which has not been appreciated by the public. Dr. Keating impressed upon the profession present, the vital necessity of being thorough in this work, and not merely looking at an individual's tongue, feeling pulse, taking temperature and passing it up as "Just another case."

Illustrating the importance of "Periodic Health Examinations," one of the physicians related his experience that had happened some four or five years ago. A woman about sixty years of age came some distance into his office complaining of one of her toes. When questioned regarding her condition, she made the statement, that she had never been examined, but as far as she knew, she was all right. The woman had a general examination, and it was discovered that she had a rather advanced Bright's disease, and a heart disease that was advanced to the point that the heart was dilated, and the valves leaking. The woman was instructed how to take care of herself and under management her life was prolonged several years. If she had not had something wrong with her toes, which was probably not related she would have gone on and become progressively worse, to the point that medical manage-

ment would not have done her any good. Had this been discovered a year earlier, and it probably would have been under the "Periodic Health Examinations" plan, likely much more could have been done for her.

### Iroquois County

The Iroquois County Medical Society met in regular session Jan. 27th, at the Iroquois Hospital, Watseka, after a six o'clock dinner served in the dining room.

Officers for the ensuing year were elected as follows: President, Dr. Horace Gibson; vice-president, Dr. J. L. Shawl; secretary and treasurer, Dr. C. H. Dowsett; censors, Drs. Ross, Buckner and Wood; delegate, Dr. W. H. Whitsitt.

Dr. J. L. Funkhouser, Urologist, Danville, gave a very interesting talk on "Cystoscopy as a Means of Diagnosis and Treatment," illustrated with lantern slides and films.

He was assisted by Dr. Ernest Kraft, Technician of the Lake View Hospital. Discussion led by Dr. Ross. Number of members present, twelve. Meeting adjourned to call of the Secretary.

C. H. DOWSETT, M.D.,  
Secretary.

### Warren County

The Warren County Medical Society held one of the biggest meetings in its history on Tuesday, January 4, 1927, at the Monmouth Elks Club, beginning at 4:00 p. m. with a talk on Cancer by Gilbert Fitz-Patrick, M.D., Chairman of the Executive Committee for Illinois, of the American Society for the Control of Cancer.

Doctor Fitz-Patrick talked on the organization, its history, purpose, and illustrated his talk with motion pictures on the subject of Cancer.

At the same hour, Doctor Joseph Colt Bloodgood of Johns Hopkins University Medical School, Baltimore, talked at the high school auditorium to more than four hundred members of the Federation of Women's Clubs and members of other organizations, including the teachers' association of Warren County, the subject of the address being "What Every Woman Should Know About Cancer."

A banquet was served at 6:30 p. m. at the Elks Club to nearly two hundred physicians and dentists of Western Illinois and Eastern Iowa. A short after-dinner program was given, Professor Frank W. Phillips, Superintendent of Schools, acting as toastmaster. The address of welcome was given by John Lugg, mayor of Monmouth. Mr. Lugg has more than the usual interest in the work of the medical profession, and this was shown in his address. The welcome from the Warren County Medical Society was given by Dr. Frank C. Winters of Monmouth. Other talks were made by Doctor Mather Pfeifferberger of Alton, President of the Illinois State Medical Society, G. Henry Mundt, Chicago, President-Elect, and William D. Chapman, Silvis, Chairman of the Council.

At 7:30 the principal address of the evening was



given by Dr. Joseph C. Bloodgood on his favorite subject, "Cancer." In his usual characteristic and forcible manner, Dr. Bloodgood told the results of his many years of investigations on the subject, impressing on all his listeners that we do know much more about cancer today than the profession knew twenty-five years ago.

Many illustrations were shown on the screen to emphasize many of the points made in the talk. Dr. Bloodgood stated that his records show that hopeless cancer of the breast has been reduced from 55 per cent to less than 10 per cent, and the actual cures have increased from less than 10 per cent to more than 60 per cent. He attributes these improvements to the fact that people have been given correct information concerning cancer. With an increase in our educational efforts there should be a diminution in the mortality from this disease.

Dr. Bloodgood is a hearty advocate of the periodic health examination, or the annual health inventory and believes it one of the best things to aid in the check of cancer.

He emphasized the necessity of frequent dental examinations, the proper selection of diet and other things of considerable importance in the consideration of the subject.

This meeting was the first of a series of meetings held in Illinois at which Dr. Bloodgood appeared on the program, and it was arranged by the American Society for the Control of Cancer, through the Illinois branch, of which Dr. Gilbert Fitz-Patrick is Chairman.

There were nearly two hundred physicians and dentists present, many of whom traveled as far as two hundred miles to hear Dr. Bloodgood. About fifty of this number came from Iowa and all were unanimous in their opinion that it was one of the best county society meetings they have ever attended.

CHARLES P. BLAIR, M.D.,

Secretary.

## Marriages

ALBERT LEE ALDERSON to Miss Frances Ireland, both of Pana, Ill., Oct 30, 1926.

PERRY EMORY DUNCAN, Ozark, Ill., to Miss Edna Earl of Grand Forks, N. D., Dec. 25, 1926.

## Personals

Dr. Alex S. Herschfield has been appointed state alienist, appointment to take effect February 16.

Dr. Edward J. Wheatley has been elected president of the medical staff of St. Elizabeth's Hospital, Danville.

Dr. Warner L. Eddy, Milan, has been elected president of the staff of St. Anthony's Hospital for 1927.

Dr. Frank Smithies has been elected con-

sultant in diseases of the alimentary tract at the Municipal Tuberculosis Sanitarium.

Dr. Jacob P. Greenhill addressed the Dubuque County Medical Society, Iowa, February 15, on "Present-Day Management of Uncomplicated Labor."

Dr. Selmes Paul Funkhauser, St. Louis, addressed the Madison County Medical Society, February 4, Edwardsville, on "Significance of Red Blood Cells in the Urine."

Dr. A. M. Saunders, acting director, Illinois State Psychopathic Institute, addressed the Chicago Council of Medical Women recently on "Early Manifestations of Mental Disease as They Come Under the Observation of the General Practitioner."

Dr. Joseph A. Capps and Dr. Joseph L. Miller have been transferred from clinical professorships in the department of medicine, Rush Medical College, to clinical professorships in the department of medicine, Ogden Graduate School of Science for three years from July 1, 1927. The board accepted the resignation of Dr. Julius E. Lackner as assistant clinical professor in the department of obstetrics and gynecology at Rush Medical College.

Dr. Emmett Keating addressed the Stephenson County Medical Society at Freeport February 24.

Drs. Parker and Durkin announce the return of Dr. George Parker from six months of travel and study abroad. 927 Peoria Life Building, Peoria, Ill.

Dr. Ralph H. Kuhns, Director of the Department of Pediatrics at the Illinois Post-Graduate Medical School, has been appointed Assistant Attending Physician to the Children's Memorial Hospital, Chicago, and a member of the Faculty in Medicine of the University of Chicago and a member of the medical staff of the Illinois Children's Home and Aid Society, Chicago.

## News Notes

—The Chicago Gynecological Society held its four hundred and twenty-third regular meeting February 18 and was addressed by Drs. Carl H. Davis, Milwaukee, and Roland S. Cron on "Congenital Absence of the Vagina," and by Dr. Mark T. Goldstine on "Adenomas."

—The Peoria Municipal Tuberculosis Sanatorium has opened a new addition which makes

the capacity of the institution eighty beds; patients from neighboring counties are also admitted to the sanatorium.

—The Chicago Neurological Society met at the Drake Hotel, February 17. The speakers were Drs. David M. Levy, Hugh T. Patrick, George B. Hassin, Eugene F. Traut and George J. Mohr.

—Charles Roth, Chicago, was sentenced to thirty days in jail and fined \$500, February 18, it is reported, for practicing medicine without a license. Roth is said to have received \$70 in fees for treating a woman who died of cancer.

—The secretary of the Methodist Board of Hospitals and Homes, 740 Rush Street, Chicago, recently took over the Freeport General Hospital, Freeport, which will be known hereafter as the Freeport Methodist Memorial Hospital.

—The staff and other departments of the Washington Park Hospital, Sixtieth Street and Vernon Avenue, are being reorganized; Dr. Francis P. Hammond has been elected president of the staff and chief of the surgical division, and Dr. Roy R. Jamieson has been elected chairman of the medical section of the staff.

—The Chicago Neurological Society and the Chicago Orthopedic Club held a joint meeting January 20. Drs. Hugh T. Patrick read a paper on "Sciatic Neuritis;" Edwin W. Ryerson, "After-Treatment of Infantile Paralysis;" John Ridlon, "Pott's Paraplegia;" Lewis J. Pollock, "Peripheral Nerve Injuries," and John L. Porter, "Arthritis of the Spine."

—Dr. Gladys R. H. Dick was guest of honor at a tea January 30 at the home of Mrs. Charles S. Moody, to which the women medical students of the University of Chicago, Northwestern, Illinois and Loyola medical schools were invited. Mrs. Moody is vice chairman of the Women's and Children's Hospital, which started a drive for funds, February 6.

—Headquarters have been established in the Morrison Hotel to obtain \$500,000 for a new building for the Women and Children's Hospital of Chicago, now at 1712 West Adams Street, formerly known as the Mary Thompson Hospital. The present building has been in use for forty-one years, and is now so outworn that one-third of it has been closed. This hospital was founded by Dr. Mary Thompson in 1865 to aid widows and orphans of the Civil War. The

site for the proposed 100 bed building is at Ashland Avenue and Maypole Street. There are opportunities for memorial gifts ranging from \$50,000 for an operating room to \$2,500 for an examining room, and of gifts for units such as a dispensary wing ranging from \$100,000 to \$15,000 for a solarium. The outpatient department of the Women and Children's Hospital last year treated 9,075 cases, mostly without charge. This is said to be the only hospital in the country whose staff is made up entirely of women.

—At a regular meeting of the Elgin Physicians' Club, Feb. 14, 1927, to David C. Strauss, F. A. C. S., of Chicago, spoke authoritatively on "Gall Bladder Diseases as Seen by the Surgeon." His large experience, and the use of lantern slides to illustrate his talk, proved very instructive.

—A convention of state hospital physicians was held in Chicago from January 17 to January 27. Physicians from all state hospitals for the insane, feeble-minded and epileptics in Illinois attended the convention, which consisted of a course of lectures, clinics, demonstrations and visits to several hospitals in Chicago. Dr. A. M. Saunders, acting director of the Illinois State-Psychopathic Institute, was chairman of the meeting.

—Coles-Cumberland Medical Society has elected the following officers: Dr. W. G. Wallace, Mattoon, president; Dr. S. E. Bigler, Neoga, vice-president; Dr. E. E. Richardson, Mattoon, secretary; delegate, C. D. Swickard; alternate delegate, Dr. R. J. Coultas; board of censors, C. B. Voight, 1 year; H. A. Shaffer, 2 years; Dr. Iknayan, 3 years.

—The following examination dates have been assigned by the American Board of Otolaryngology: Washington, D. C., Episcopal Eye, Ear and Throat Hospital, Monday, May 16, 1927, at 9 o'clock. Spokane, Washington, Saturday, June 4, 1927, at 9 o'clock.

—The North Side Branch of Chicago Medical Society held an Albert J. Ochsner Memorial meeting, February 3, with the following program: "A Personal Appreciation of Ochsner," Walter W. Chipman, Montreal, President, American College of Surgeons; "Ochsner's Work," William J. Mayo, Rochester, Minn.; "Surgical Progress," Allen B. Kanavel, Professor of Surgery, Northwestern University Medi-



cal School. This is the first lecture of the Ochsner Memorial Lectures, established by the North Side Branch of the Chicago Medical Society.

## Deaths

CYRUS L. MILLER, Makanda, Ill.; Medical College of Ohio, Cincinnati, 1878; aged 81; died, in December, 1926, at Benton, of heart disease.

DANIEL LAWRENCE, Golconda, Ill.; College of Physicians and Surgeons, Keokuk, 1878; aged 77; died, January 13, of cardiac asthma.

ZACHARY T. BAUM, Paris, Ill.; Miami Medical College, Cincinnati, 1870; Civil War veteran; formerly mayor of Paris; aged 79; died, Dec. 21, 1926, of heart disease.

FRANK STANTON ABY, Chicago; Chicago Homeopathic Medical College, 1895; Medical Department of the University of Illinois, Chicago, 1897; aged 61; died, January 10.

JACOB C. ANDERSON, Paxton, Ill. (licensed, Illinois, 1882); aged 82; died, January 17, of heart disease.

JACOB BARTON CATO, Hutsonville, Ill.; Hospital College of Medicine, Medical Department Central University of Kentucky, Louisville, 1891; member of the Illinois State Medical Society; aged 60; died, Dec. 27, 1926, at the Mary Sherman Hospital, Sullivan, following a cholecystectomy.

JEREMIAH A. CASEY, Chicago; Chicago College of Medicine and Surgery, 1916; a Fellow, A. M. A.; aged 51; died, January 29, of chronic myocarditis.

LEWIS ROACH DAY, Winchester, Ill.; Barnes Medical College, St. Louis, 1897; aged 60; died, Dec. 29, 1926, of cerebral hemorrhage.

Thomas J. Exton, Thomasboro, Ill.; Bennett Medical College, Chicago, 1890; aged 67; a member of Illinois State Medical Society and practitioner in Champaign county for 30 years; died while making a professional call, February 14, from cerebral hemorrhage.

ERNEST JASON FORD, Evanston, Ill.; University of Illinois College of Medicine, Chicago, 1906; a Fellow, A. M. A.; formerly associate in surgery at his alma mater; on the staff of the Evanston Hospital; aged 48; died, January 17, at Phoenix, Ariz., of heart disease.

EMILIE L. FORST, Chicago (licensed, Illinois, 1913); aged 55; died, Nov. 22, 1926, at St. Anthony's Hospital, of diabetes.

THEODORE FLEMING GEROULD, Centralia, Ill.; Jefferson Medical College of Philadelphia, 1901; a Fellow, A. M. A.; aged 47; died, January 31, of acute nephritis.

ASA L. FOX, Bloomington, Ill.; University of Michigan Medical School, Ann Arbor, 1870; formerly on the staffs of the Brokaw and St. Joseph's hospitals; aged 80; died, January 4, of senility.

LEROY O. JENKINS, Paris, Ill.; American Medical College, St. Louis, 1878; Harvey Medical College, Chicago, 1897; aged 76; died, February 2, of uremia.

ANNIE E. KELSO, Bloomington, Ill.; University of Michigan Homeopathic Medical School, Ann Arbor, 1886; aged 78; died, January 5, of myocarditis.

LEROY MONTGOMERY KRAMER, Chicago, Jenner Medical College, Chicago, 1903; aged 56; died, January 3, of acute dilation of the heart.

WILLIAM GEORGE LEE, Chicago; Medical School of Harvard University, Boston, 1904; assistant clinical professor of obstetrics and gynecology, Rush Medical College, Chicago; on the staff of the Cook County Hospital, 1914-1925; served during the World War; aged 53; died, February 10, of coronary thrombosis.

CHARLES R. MOORE, River Forest, Ill.; Rush Medical College, Chicago, 1894; a Fellow, A. M. A.; on the staff of the Norwegian-American Hospital, Chicago; aged 57; died, January 6, following an operation for carcinoma of the sigmoid.

GEORGE D. MOORE, Peoria, Ill.; Medical Department of the University of Wooster, Cleveland, 1892; was found dead, Dec. 14, 1926, of cerebral hemorrhage.

JAMES PANKHURST, Grand Detour, Ill.; Rush Medical College, Chicago, 1868; aged 81; died, January 8, following a long illness.

JOHN RAWSON PENNINGTON, Chicago; University of Maryland School of Medicine, Baltimore, 1887; a Fellow, A. M. A.; Kentucky School of Medicine, Louisville, 1891; chairman of the Section on Gastro-Enterology and Proctology of the American Medical Association, 1922-1923; professor of operative surgery and rectal diseases, Chicago College of Medicine and Surgery, 1908-1912; member and past president of the American Proctologic Society; on the staff of the Columbus Hospital; author of "Treatise on the Diseases and Injuries of the Rectum, Anus and Pelvic Colon," 1923; aged 68; died, February 3, of angina pectoris and thrombosis of the coronary artery.

WILLIAM J. ROSE, Columbia, Ill.; St. Louis Medical College, 1896; a Fellow, A. M. A.; aged 52; died, January 23, of heart disease.

JOHN N. SHAFF, Alton, Ill.; Rush Medical College, Chicago, 1900; a Fellow, A. M. A.; on the staff of St. Joseph's Hospital; aged 59; died, January 22.

MYRON WEBSTER SNELL, Jacksonville, Ill.; Jefferson Medical College of Philadelphia, 1898; a Fellow, A. M. A.; served during the World War; formerly on the staff of the National Home for Disabled Volunteer Soldiers, National Home, Wis.; chief medical examiner for the American Bankers Insurance Company; aged 55, died, January 4, at the Passavant Hospital, of pneumonia.

WILLIAM KINDOL FARLEY, Fulton, Illinois; Rush Medical College, Chicago, 1887; a Fellow, A. M. A.; died, at his home in Fulton, Illinois, February 12, 1927, of pernicious anemia; aged 76.



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# Illinois Medical Journal

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SEVENTY-SEVENTH ANNUAL MEETING AT MOLINE, MAY 31, JUNE 1 and 2, 1927

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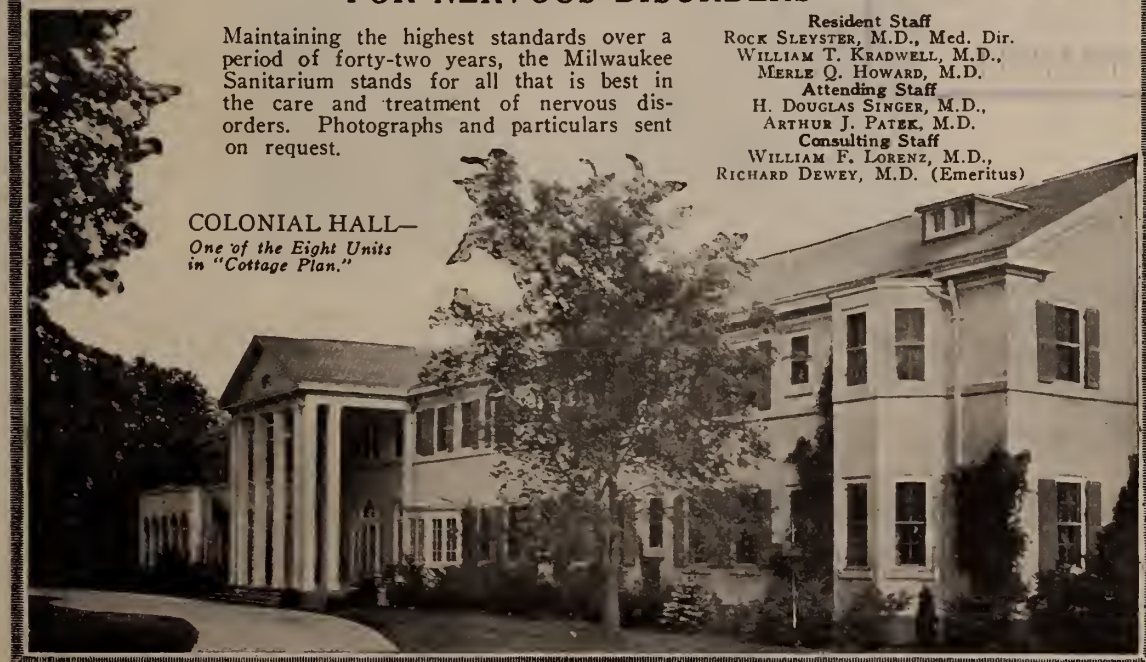
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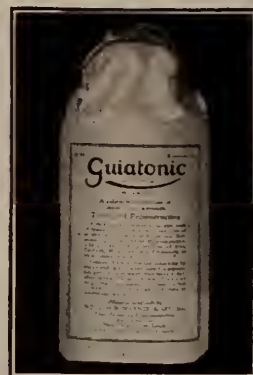
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# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF

THE ILLINOIS STATE MEDICAL SOCIETY

VOL. LI

OAK PARK, ILL., APRIL, 1927

No. 4

## ILLINOIS MEDICAL JOURNAL

Published monthly by the Illinois State Medical Society under the direction of the Publication Committee of the Council.

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Send original articles and all communications relating to advertisements to Dr. Charles J. Whalen, Editor, 6221 Kenmore Avenue, Chicago.

Membership correspondence to Dr. Harold M. Camp, Monmouth, Ill.

Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 1618 Juneway Terrace, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

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## Editorial

### THE ANNUAL MEETING AT MOLINE—A MESSAGE FROM THE COMMITTEE ON ARRANGEMENTS

Thirty passenger trains on three railroads will be at the daily service of members and guests bound for Moline to attend the seventy-seventh annual meeting of the Illinois State Medical Society. Hard roads, completed Route No. 3 from the north and south and completed Route No. 7 from the east, feed from every section of Illinois. Moline is nine driving hours from East St. Louis and six from Chicago or Springfield.

Moline serves a trade territory of 175,000 people in and about a county which is unsurpassed by any locality in the United States in points of natural beauty, commercial possibilities and major historic interest.

Rock Island County was the scene of the westernmost campaign of the American revolution and bore a share in the tragic land warfare of 1812-14. Its strategic position has likewise given it play in every other major historic episode of the nation. The Arsenal Island is well worth a pilgrimage by Americans: a federal park, a national cemetery, a prison for Confederate soldiers and the final resting-place of some two thousand of their unvaccinated, an arsenal that gave employment to fifteen thousand people during the late war, it has been intimately bound in the progress of the Northwest Territory from the time of its first appraisal by white men, upon the visit of Louis Joliet and Father Marquette in 1673. This nine hundred and ninety acres of the boyhood playground of Blackhawk has come to include not only factories and shrines, but also one of the finest golf courses in America.

During the hundred years of war among the English, French, Americans and Indians, natural advantages made Sauk-e-nauk the largest Indian village on the continent. Natural and commercial advantages placed the first bridge across the Mississippi not far from the same spot, the bridge



which Abraham Lincoln saved for the Rock Island railroad in the peculiar Lincoln fashion; thus opening the plains states to railway development. Those same advantages still have influence with the economists who have built a mid-west consciousness and who have pointed to Rock Island county of the middle west, as the center of our next and greatest industrial expansion.

Natural beauty is Rock Island county's own: we are anxious that you see it. Interrupted hill ranges thrown between glacial valley, dry beds and present beds of rivers, and all small enough in scale to permit the grasping of a birds-eye-

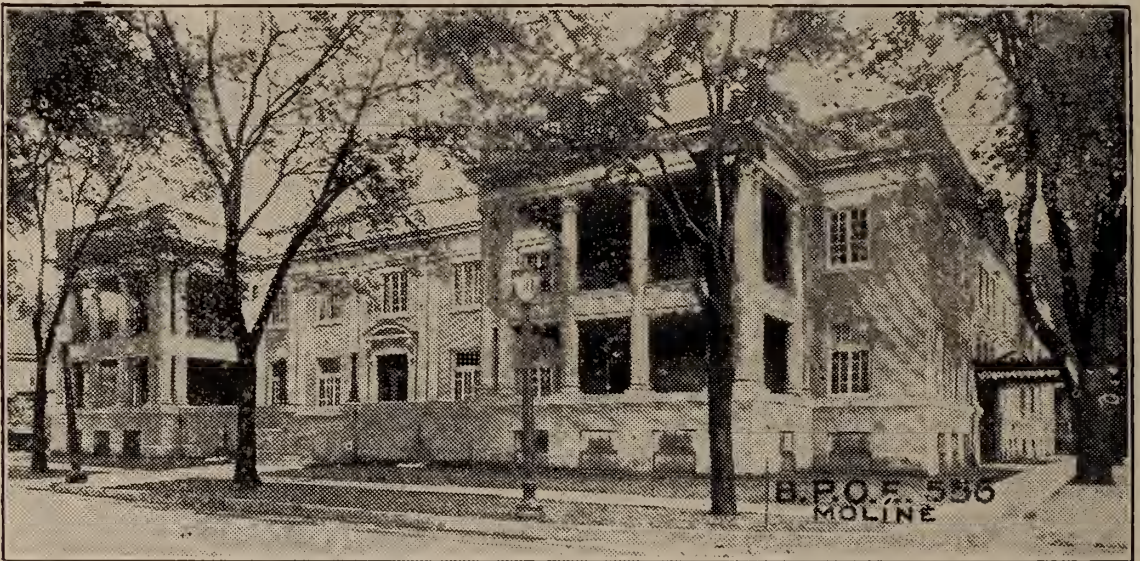
chairman; Wm. D. Chapman, councilor; D. R. Nelson, president, Rock Island County Medical Society; P. H. Wessel, president, Moline Physicians' Club; K. W. Wahlberg, J. W. Seids, H. A. Beam, F. J. Otis, F. N. Davenport, G. D. Hauberg, T. L. Thomson, Hada Carlson, D. B. Freeman.

The several sub-committees have reported:

#### MEETING PLACE

H. A. Beam, Chairman

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view from an automobile. To the lover of beauty we commend Blackhawk's Watch Tower no less than the Hospital Hill at Watertown. A sunset drive from East Moline to Port Byron offers a treat for artists who have watched sunsets from both coast and from both mountain ranges.

The committee wishes to stress the community spirit of welcome which the preliminary work has brought out: not a hotel has raised its rates (page 86, ILLINOIS MEDICAL JOURNAL of February, 1927); the contract offered for meeting-place is complete in detail and highly advantageous to the society; Moline retailers have signed exhibit hall contracts. The committee urges that members meet this spirit and indulge a family outing of value. There is room and to spare for all who can attend.

Committee on Arrangements: A. T. Leipold,

The contract offered by the Elks Club and accepted by our council is fine in spirit and complete in its appointments.

#### CLINIC MATERIAL

F. J. Otis, Chairman

Essayists wishing dry-clinic material or demonstrators wishing clinical patients should communicate their requests to the chairman, as early as possible. An ambulance for the transportation of patients and a nurse for their convenience are awaiting orders.

#### EYE, EAR, NOSE AND THROAT

Frank N. Davenport, Chairman

Reports a full day Tuesday in prospect: morning golf, noon business meeting, afternoon dry-clinics, and an evening banquet at Short Hills Country Club. Wednesday, scientific session.

## INFORMATION AND HOTELS

G. D. Hauberg, Chairman

The committee requests that all hotel reservations be made through the chairman, rather than with the hotels direct. If this were done we believe that no visitor would have cause for complaint. The committee feels its responsibility as host no less keenly than do the Rock Island county society and the Moline Physicians' Club and is now making a survey and list of garages for storage and parking use. This list will be available at our stand in the Registration booth at the Elks' building.

Visitors without advance reservation will be accorded service by an agent of the committee: hotel accommodations secured, baggage checked and delivered to room, information given, at the time of registering for the meeting.

*PLACE: Registration desk, Exhibit Hall, Elks Building.*

Windshield stickers, inviting police department courtesies for visiting automobilists, will be available at the desk and will appear, if possible, in the May issue of ILLINOIS MEDICAL JOURNAL.

## SPORTS

T. L. Thomson, Chairman

*Golf Tournament*—Place: Short Hills Country Club. Cups: By Moline Physicians' Club. Play: Continuous, daylight hours. (It is hoped, however, that Thursday may be the principal day of play; thus avoiding conflict of hours.)

Please do bring your golf clubs and help make this a real tournament.

*Aeronautics*—Landing Field: Excellent, day or night; a half mile south of Rock River, five miles above its mouth. Outline lights; Neon light; Hangars for visitors.

Through the courtesy of Dr. C. C. Sloan free airplane rides are offered for a limited number of visitors.

## ENTERTAINMENT

D. B. Freeman, Chairman

Wednesday night: Stag at the Eagles summer home on Rock River; a fish buffet-lunch, with suitable entertainment. Negotiations are under way looking toward a reasonable special flat-rate taxi service between the Elks Club and Rock Island or Davenport hotels.

## LADIES' ENTERTAINMENT

Mrs. Hada Carlson, Chairman

Tuesday noon and afternoon: Luncheon bridge at LeClaire roof garden; luncheon, program, bridge. Late arrivals are urged to attend, whether for bridge or for social hour.

Tuesday evening: An open meeting of the society.

Wednesday morning: Sightseeing tour about Arsenal Island, Davenport, Rock Island, Blackhawk's Watch Tower, Moline Flying Field, Watertown Hospital where luncheon will be served; return to Moline.

Afternoon: Garden party at the home of Dr. and Mrs. P. H. Wessel.

Evening: Movie, with special entertainment.

An especially cordial invitation is extended for the Moline meeting. The later spring date seems an advantage and the committee does hope that the ladies may grant us a generous attendance.

## NOTES

Colonel D. M. King invites our guests to visit the Arsenal and use its golf course. The usual greens' fee will be the only charge.

Exhibitors will find sign painter, electrician and carpenter subject to call at rates already agreed upon. There will be no raising of rates.

Members of the Iowa society are invited to attend all sessions.

The programs of the Illinois Trudeau Society and of the Industrial Surgeons Society begin on Tuesday morning; courtesies extended.

PUBLICITY COMMITTEE.

# MAKE HOTEL RESERVATIONS EARLY ILLINOIS STATE MEDICAL SOCIETY ANNOUNCEMENTS

The seventy-seventh annual meeting of the Illinois State Medical Society will be held in Moline, May 31, June 1-2, 1927. In anticipation of one of the largest and best meetings in the history of the society, the committees on arrangements have inaugurated extensive preparations for the meeting and entertainment of the Society.

The committee on hotel accommodations urge that reservations for the meetings be made early.

The hotels have agreed that reservations may be made directly through our Hotel Committee.



Those wishing to make reservation will please address Dr. G. D. Hauberg, chairman, Hotel Committee, Moline, Ill., stating hotel preference, etc.

Below will be found a list of the principal



Leclair Hotel, Moline, Ill.

hotels in Moline, Rock Island and Davenport:

#### MOLINE HOTELS

##### *Leclaire Hotel:*

200 rooms and 70 apartments. Can accommodate about 400 persons.

##### Rates—

- \$3.00 for a single room with tub and shower bath.
- \$4.50 for a double room with tub and shower bath.
- \$5.50 for a room with twin beds for two persons.
- \$8.00 for a room with twin beds for four persons.
- \$2.50 for a bed in an apartment.



Fort Armstrong Hotel, Rock Island, Ill.

##### *Campbell Hotel:*

Can accommodate about 25 persons.

##### Rates—

- \$2.00 for room with bath (single).
- \$3.00 for room with bath (double).
- \$1.50 for room without bath (single).

\$2.50 for room without bath (double).

\$1.25 for room with single bed.

\$1.00 each for rooms with two full beds, four in room.

All rooms have hot and cold water, shaving mirror, etc.

##### *Hotel Mayfair:*

\$1.50 per person, 2 in room, without bath.

\$2.00 per person, 2 in room, with bath.

\$4.00 for double room.

#### ROCK ISLAND

##### *Hotel Fort Armstrong:*

80 rooms. Can accommodate 160 persons.

##### Rates—

\$2.25, \$2.50, \$3.00, \$3.50, \$4.00.

\$2.00 per person extra.

##### *New Harper Hotel:*

75 rooms available.

##### Rates—

\$2.00 to \$2.50 for single room with bath.

\$1.50 for single room without bath.

\$4.00 to \$4.50 for double room with bath.

\$2.50 to \$3.00 for double room without bath.

##### *Como Hotel:*

50 rooms available.

##### Rates—

\$1.75 to \$2.50 for single room with bath.

\$1.00 to \$1.75 for single room without bath.

\$2.75 to \$4.00 for double room with bath.

\$2.00 to \$2.50 for double room without bath.

##### *Hotel Harms:*

25 rooms available.

##### Rates—

\$1.50 for single room without bath.

\$2.00 to \$2.50 for single room with bath.

\$3.50 to \$4.50 for double rooms.

All outside rooms; running hot and cold water.

Rock Island, 10 minutes by auto from convention headquarters; 20 minutes by street car.

#### DAVENPORT HOTELS

##### *Hotel Blackhawk:*

About 100 rooms available.

##### Rates—

Rooms with lavatory and toilet, \$3.50 and \$4.00 per day.

Rooms with shower bath, \$4.00 and \$4.50 per day.

Rooms with tub bath, \$5.00, \$5.50, \$6.00 and \$7.00.

The above rates are for two people in a room.

Davenport 15 minutes by auto and 40 minutes by street car.

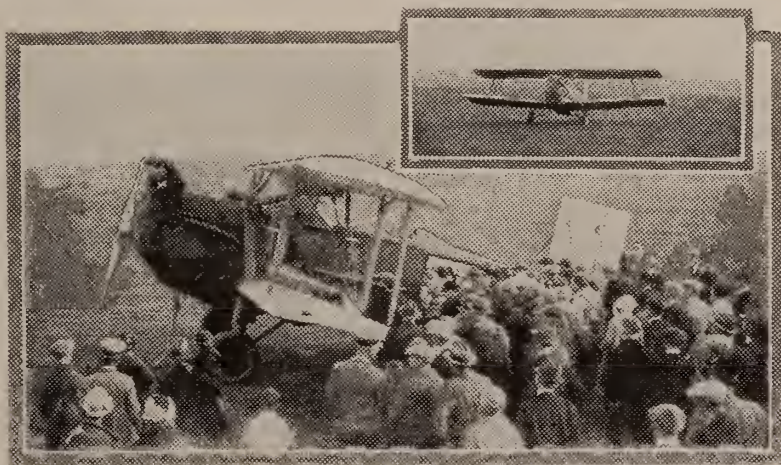
### MOLINE IN AVIATION

Moline is a pioneer in aviation and has one of the finest airports in America. It has a commercial aviation company which offers passenger service to all parts of America.

The photograph shows a view at Moline airport when the first air mail plane arrived last spring. A huge crowd welcomed the air post-

"mugwump" conscience. Nor did he subscribe even half-heartedly to the adage of "making friends with the mammon of iniquity."

Intolerant of sham, and of the gods of current expediences Dr. King as the years drifted by, developed a brusqueness of manner that at times was sadly blunt. Yet a more generous heart, soul and purse might not be found than those of Dr. King. Deep within him was graven the idea that to be a doctor meant that a man must become a sort of "little father" of the poor and



First Air Mail in Moline

man. Moline is a station on the Chicago-Dallas, Tex., air mail route.

### CLARENCE BRUCE KING—A TRIBUTE

For a man to die "full of years," with his life work ended is tragedy enough for those who have drunk from that man's wisdom and been succored by the potencies of his skill.

When such a man is cut off as his tasks are approaching the zenith of their possibilities is a community tragedy.

Only a few days ago, the medical profession went in sorrow to the funeral services for Dr. Clarence Bruce King. As men of science go, Dr. King was a young physician, as he was barely past the half century mark.

Through his passing there is a niche in the profession that time will be long in filling.

In the life of Dr. King, much for emulation can be discovered by medicine's younger generation. Courage was his synonym. With him fear stood as an unknown element. Right was right. Only right was proper or even plausible. Dr. King had small patience with the prevalent

the sick and the ailing. With such a fundamental tenet upholding his days, Dr. King worked unstintedly. Giving unsparingly of everything he had to give—of medical skill, of money, of care, of strength, of faith, of mortal tolerance, and, best of all, of the guerdon of firm and sincere friendship, well had he the right to say with that beloved apostle,

"I have fought a good fight, I have finished my course, I have kept the faith."

Through the years men have sought and women have prayed for an answer to the riddle of death, for a sum of consolation to those who have remained behind. Dr. King's death was sudden—he was ill for only eleven days. Only a brief fortnight and he had gone. It is well to remember that brave men, and Dr. King was a brave man—brave in the bravery of peace and patient service—the hardest bravery of all—have always liked to die in that way. Caesar it was when asked, "What is the best way to die?" replied, "That death is best that is the most unexpected."

One might without fulsomeness remark of Dr.



King that as mortals go, if measured by human worth is a comparative criterion, then indeed was he "one of whom the world is not worthy." It is a fine thing to bear the petty trials of every day without complaint or puling criticism.

A man's keenest critics are his contemporaries. So perhaps it is best, most eloquent and most discriminating to say about Dr. King those things some of his fellow-workers uttered as to his following of the creed of service to his fellow-men. These have been said in the face of that doubt existing in the minds of all men and phrased so exquisitely by that eloquent atheist, Robert G. Ingersoll, when he wrote:

"Is there beyond the silent night an endless day? Is death a door that leads to light? We cannot say."

Dr. King was one of the men who helped mix the mortar that made it possible to build, stone by stone, the present sturdy edifices of the Illinois State and the Chicago Medical Societies and the West Side branch of this latter organization. Dr. King was one in whom gayety and gravity were gracefully mingled. There have been few who kept the gleefulness of youth under such a thin veil when thrall'd and burdened with the responsibilities of a dignified profession and position in metropolitan society. He was always a boy, but ever so much more—a man!

In the struggle of life the stuff of which he was made was staunch enough to defy discouragements. As often as we looked upon his face in the long years of acquaintance, never was seen a face of depression. Among the many overworked medical men in Chicago and Cook county, which of them has taken his part of this trying profession more courageously than did Clarence Bruce King?

He was a broad minded man. He was never heard to utter a carping criticism of any practitioner. Uniformly gentle and generous was his judgment of men.

True to his own school of medicine yet Dr. King accorded a generous confidence to others who differed from him in doctrine and doctoring. He was true to his honored school of medical science. First and over all it had his heart. He spared nothing that self-sacrifice could render to add still further distinction to his profession. He stands an example for those who shall come after. The editor is inclined to think that

when the roll of martyrs shall be called at last for the crowning, that well up towards the head of the list will be found the name of Clarence Bruce King. Perhaps it may stand as did also at one time that of Abou Ben Adhem.

Dr. J. W. Van Der Slice, in his oration at Dr. King's obsequies, said aptly of our colleague: "It is easy for us to keep Dr. King with us, for love is the atmosphere in which memory flourishes most abundantly. Dr. King's was a personality that attracted an ever-widening circle of friends. His brusqueness of manner was an outer garment concealing the true man within. In the sick room he was a personification of service. No task was too menial for his best attention. The medical profession remembers him best for his great work in organized medicine. In the work of his branch he was one of the outstanding units. His was the creative kind that made for the branch societies their usefulness and success. His was no mollycoddle's part. He was a hard, two-fisted fighter and anybody who encountered him in committee or on the floor of the council was apt to come away with the scars of battle. He had a keen political insight. During more than a decade his was the duty to care for a brother physician in trouble.

"The kindness, self-sacrifice, and wholehearted service that Clarence Bruce King gave to those who needed the help of the medico-legal committee can be given full testimony only by those who benefited therefrom. His was no easy position. But he had an honesty of purpose, a fearlessness of personal consequences, a tenacity for details and a fund of information that made his advice invaluable. He could neither deceive himself nor any other man, and it was a shrewd man who could deceive him. He moved forward in pursuit of the right forever. The debt of gratitude that the profession owes him can never be paid.

"Dr. King owned the qualities that compel friendship. Loyalty and loveableness were his in rare measure. No one ever knew him to go back on a friend. He endeared himself without effort and unconsciously to all sorts and conditions of people. He had that peculiar characteristic that made him companionable to the aged and to the young, as well as to his contemporaries."

Clarence Bruce King—soldier of the people and for the people—Good-night!

## ILLINOIS STATE MEDICAL SOCIETY

## 11TH ANNUAL MEETING

Moline, Illinois, May 31, June 1-2, 1927

## OFFICERS

Mather Pfeifferberger, President, Alton.  
G. Henry Mundt, President-Elect, Chicago.  
Earl D. Wise, First Vice-President, Champaign.  
C. S. Nelson, Second Vice-President, Springfield.  
A. J. Markley, Treasurer, Belvidere.  
Harold M. Camp, Secretary, Monmouth.

## THE COUNCIL

R. R. Ferguson, 3rd District, Chicago, 1927.  
Andy Hall, 9th District, Mt. Vernon, 1927.  
..... 6th District, 1927.  
J. S. Templeton, 10th District, Pinckneyville, 1927.  
J. S. Nagel, 3rd District, Chicago, 1928.  
Wm. D. Chapman, 4th District, Silvis, 1928.  
S. E. Munson, 5th District, Springfield, 1928.  
I. H. Neece, 7th District, Decatur, 1928.  
D. B. Penniman, 1st District, Rockford, 1929.  
E. E. Perisho, 2nd District, Streator, 1929.  
S. J. McNeill, 3rd District, Chicago, 1929.  
Cleaves Bennett, 8th District, Champaign, 1929.  
Wm. D. Chapman, *Chairman*.

## ILLINOIS MEDICAL JOURNAL

Charles J. Whalen, *Editor*, Chicago.  
Henry G. Ohls, *Managing Editor*, Chicago.  
J. W. Van Derslice, *Secretary, Publication Committee*, Oak Park.

## STANDING COMMITTEES

## PUBLIC POLICY

Emmet Keating, *Chairman*, Chicago.  
Warren Johnson, Chicago.  
George Michell, Peoria.

## MEDICAL LEGISLATION

John R. Neal, *Chairman*, Springfield.  
Chas. E. Humiston, Chicago.  
Edward Bowe, Jacksonville.

## MEDICO-LEGAL

C. B. King, *Chairman*,\* Chicago.  
George Weber, *Secretary*, Peoria.  
R. O. Hawthorne, Monticello.  
J. R. Ballinger, Chicago.  
C. A. Hercules, Harvey.  
Walter Wilhelmj, East St. Louis.

\*Deceased.

## RELATIONS TO PUBLIC HEALTH ADMINISTRATION

Frank R. Morton, *Chairman*, Chicago.  
Frank Maple, Chicago.  
E. D. Levisohn, Chicago.  
J. E. Tuite, Rockford.  
E. P. Coleman, Canton.

## EDUCATIONAL COMMITTEE

R. R. Ferguson, *Chairman*, Chicago.  
Charles J. Whalen, Chicago.  
James H. Hutton, Chicago.  
Wm. D. Chapman, Silvis.  
Miss Jean McArthur, *Secretary*.

## SCIENTIFIC SERVICE COMMITTEE

Jas. H. Hutton, *Chairman*, Chicago.  
Harold M. Camp, *Secretary*, Monmouth.  
Mather Pfeifferberger, Alton.  
G. Henry Mundt, Chicago.

## SECTION OFFICERS

## SECTION ON MEDICINE

Leroy H. Sloan, *Chairman*, Chicago.  
J. L. Sherrick, *Secretary*, Monmouth.

## SECTION ON SURGERY

E. P. Coleman, *Chairman*, Canton.  
J. R. Harger, *Secretary*, Chicago.

## SECTION ON EYE, EAR, NOSE AND THROAT

Louis Ostrom, *Chairman*, Rock Island.  
C. F. Yerger, *Secretary*, Chicago.

## SECTION ON PUBLIC HEALTH AND HYGIENE

H. V. Gould, *Chairman*, Chicago.  
A. A. Crooks, *Secretary*, Peoria.

## SECTION ON RADIOLOGY

E. S. Blaine, *Chairman*, Chicago.  
Harold Swanberg, *Secretary*, Quincy.

## SECRETARIES' CONFERENCE

Elizabeth R. Miner, *President*, Macomb.  
J. W. Hamilton, *Vice-President*, Mt. Vernon.  
W. J. Benner, *Secretary*, Anna.

## COMMITTEE ON ARRANGEMENTS

A. T. Leipold, *Chairman*, Moline.  
Wm. D. Chapman, Silvis.  
D. R. Nelson, Moline.  
P. H. Wessel, Moline.  
K. W. Wahlberg, Moline.  
J. W. Seids, Moline.  
H. A. Beam, Moline.  
F. J. Otis, Moline.  
F. N. Davenport, Moline.  
G. D. Hanberg, Moline.



T. L. Thomson, Moline.

Hada Carlson, Moline.

D. B. Freeman, Moline.

#### MEETINGS OF THE HOUSE OF DELEGATES

*Tuesday Evening, May 31, 1927*

Elk's Club.

9:00—Meeting called to order by the President, Mather Pfeiffenberger for reports of Officers, Committees and other business to come before the House.

*Thursday morning, June 2, 1927*

Elk's Club

8:00—Meeting called to order by President for the election of officers, reports of Committees, Selection of place for 1928 meeting, and other new and unfinished business.

#### ENTERTAINMENT

An unusually attractive program of entertainment has been arranged for the Ladies by Dr. Hada Carlson, Chairman of the entertainment committee.

*Tuesday noon and afternoon*, luncheon bridge at the Le Claire roof garden.

*Wednesday morning*, sightseeing tour through Rock Island Arsenal grounds. "The Island Beautiful," Davenport, Rock Island, Black Hawk Watch Tower, Moline Flying Field, Watertown State Hospital, where luncheon will be served, then the return to Moline.

*Wednesday afternoon*, a garden party at the home of Dr. and Mrs. P. H. Wessel.

In the evening, a movie, with special entertainment for the guests.

It is hoped that many of the ladies will attend the meeting, as the meeting is late and the season ideal for enjoyment in and around the Tri-Cities.

The Wednesday evening entertainment for the members of the Society will include a "Stag" at the Eagles Summer Home on Rock River, a fish buffet-lunch, with suitable entertainment. The plans in detail will not be given in advance of the meeting.

Col. D. M. King, the Commandant, invites the guests to visit the Government Arsenal and use its golf course, one of the finest in the country. The usual green's fee will be the only charge.

There will be a number of Alumni and Fraternity Banquets during the meeting. These will be announced on the bulletin boards.

Classes desiring to hold reunions during the meeting, should write to the Chairman of the Arrangement Committee, at Moline, to have suitable accommodations arranged for in advance.

#### PRESIDENT'S BANQUET

The annual President's banquet has been revived, and will be held at 6:00 P. M. on Wednesday evening. Special invitations have been sent to all past presidents of the Society and it is hoped that all of them will be present. The last past President, who presided at the 1926 annual meeting, will act as toastmaster at the banquet. All members of the Society are invited to attend the banquet and tickets at a nominal cost will be sold at the Registration desk as well as by members of the Committee on Arrangements.

#### TO VISITING PHYSICIANS

On account of the fact that Moline is practically on the State Line and several hundred physicians in Iowa are within a short distance of the Tri-Cities, a cordial invitation is extended to all Iowa physicians to attend the meeting. The ladies are likewise invited and it is hoped that many will avail themselves of the opportunity to visit our Society and enjoy the programs. We welcome you to Moline during the meeting.

#### GENERAL SESSIONS

*Tuesday Evening, May 31, 1927*

Elk's Club

(Open to the Public)

7:30—Call to order of the Society by the President, Mather Pfeiffenberger.

Invocation—Rev. Frank J. Day, M.A., D.D., Pastor First Congregational Church, Moline.

Address of Welcome—Hon. C. W. Sandstrom, Mayor of Moline.

Report of Chairman of Committee on Arrangements—A. T. Leipold, Moline.

Address—Robert McE. Schauffler, M.D., Kansas City. "Why You Need a Doctor When You Are Not Sick."

*Wednesday Afternoon, June 1, 1927*

Elk's Club

2:00—Oration in Medicine: "Insulin in the Treatment of Diabetes," Elliott P. Joslin, Clinical Professor of Medicine, Harvard University Medical School, Boston.

3:00 to 6:00—Joint Meeting of Sections on Medicine and Surgery for Teaching Clinics.

*Wednesday Evening, June 1, 1927*

7:30—President's Address—Mather Pfeifferberger, President, Illinois State Medical Society, Alton.

8:00—Oration in Surgery: "Liver Function," Charles H. Mayo, Rochester, Minnesota.

9:00—Entertainment for Members and Guests, given by the Rock Island County Medical Society.

*Thursday Afternoon, June 2, 1927*

1:30—Induction of the President-Elect, G. Henry Mundt, Chicago.

1:45—Report of the House of Delegates.

#### SECRETARIES' CONFERENCE

*Tuesday, May 31, 1927*

Elk's Club

Elizabeth R. Miner, *President*, Macomb.

J. W. Hamilton, *Vice-President*, Mt. Vernon.

W. J. Benner, *Secretary*, Anna.

10:00—Education and Organization—Wm. D. Chapman, Chairman of the Council, Silvis.

10:20—Our Greatest Debt—Edwin P. Sloan, Bloomington.

10:40—Work the Scientific Service Committee Has to Offer the County Secretary—W. S. Bougher, Secretary, Englewood Branch, Chicago Medical Society.

11:00—The Country Doctor's Problems—R. F. Lischer, Mascoutah.

Discussions by E. W. Fiegenbaum, Edwardsville, Harold Swanberg, Quincy; R. R. Ferguson, Chicago; Jas. H. Hutton, Chicago and others.

The annual banquet of County Society Secretaries will be held on Tuesday evening, May 31 at 6:00 o'clock. It is hoped that as many members of the Society as can possibly do so will attend the banquet. The Secretaries of the Branch Societies of the Chicago Medical Society are expected to participate in the transactions of the Secretaries Conference, as they are an integral part of the organization.

#### SECTION ON MEDICINE

Leroy H. Sloan, *Chairman*, Chicago.

J. L. Sherrick, *Secretary*, Monmouth.

*Tuesday Afternoon, May 31, 1927*

1:00—Some Pioneers in the Field of Obstet-

rical Antisepsis—Chas. B. Johnson, Champaign. Discussion to be announced.

1:30—Importance of Early Recognition of Peptic Ulcer—Lowell D. Snorf, Chicago.

1:50—The Healing of Peptic Ulcer—Karl L. Thorsgaard, Chicago. Discussion of both papers opened by A. A. Goldsmith, Chicago.

2:20—The Prostate as a Site for Focal Infection—James V. Beynon, Rockford. Discussion to be opened by Frank Deneen, Bloomington.

2:50—Newer Knowledge of the Etiology and Treatment of Pernicious Anemia—Karl K. Koessler, Chicago. Discussion to be opened by Leroy H. Sloan, Chicago.

3:10—Diabetic Coma—G. D. Hauberg, Moline. Discussion to be announced.

3:40—The Relationship of Pregnancy to the Heart, Thyroid and to Diabetes and Tuberculosis—Phil. A. Daly, Chicago. Discussion to be opened by Elliott S. Denney, Aurora.

4:10—Upper Respiratory Infection With Associated Pulmonary Involvement in Childhood—Borden S. Veeder, Clinical Professor of Pediatrics, Washington University School of Medicine, St. Louis. (By Invitation). Discussion to be announced.

5:00—Angina Pectoris—Harry A. Durkin, Peoria. Discussion to be announced.

*Wednesday Morning, June 1, 1927*

8:00—Functional Nervous Disorders, Their Nature and Management—Meyer Solomon, Chicago. Discussion to be announced.

8:30—Chorea—Jesse Gerstley, Chicago. Discussion to be announced.

9:00—Pulmonary Hemorrhage—Herman H. Cole, Springfield. Discussion to be opened by R. T. Pettit, Ottawa.

9:30—Sanocrysin Treatment in Pulmonary Tuberculosis—K. J. Henriksen, Chicago. Discussion to be opened by H. C. Sweany, Chicago.

10:00—The Mechanism and Etiology of Arterial Hypertension—Ralph Major, Professor of Medicine, University of Kansas School of Medicine, Kansas City. (By invitation.) Discussion opened by Nathan S. Davis, III, Chicago and Robert W. Keeton, Chicago.

10:50—Classification of the Nephritides—Warren Pearce, Quincy.

11:10—Newer Phases of Nephritis and Its Treatment—Jacob Meyer, Chicago. Discussion both papers by Jas. H. Hutton, Chicago.



11:40—Syphilis of the Vascular System—Robert Berghoff, Chicago. Discussion to be announced.

*Wednesday Afternoon, June 1, 1927*

3:00 to 6:00—Teaching Clinics, joint session of Sections on Medicine and Surgery. These to be given by Drs. B. S. Veeder, Ralph Major, Elliott P. Joslin, Chas. H. Mayo, Karl Koessler and others. Subjects to be announced.

*Thursday Morning, June 2, 1927*

9:30—Otitis Media in Infancy—Gerald Cline, Bloomington. Discussion to be opened by Robert Graham, Aurora.

10:00—Knocks and Boosts of a Country Doctor—B. F. Lischer, Mascoutah.

10:30—Intracranial Injuries in the New Born—Ralph Kuhns, Chicago. Discussion to be announced.

11:00—The Management of the Asthmatic—A. M. Feinberg, Chicago. Discussion to be announced.

SECTION PROGRAMS

SECTION ON SURGERY

E. P. Coleman, *Chairman*, Canton.

J. R. Harger, *Secretary*, Chicago.

*Tuesday, May 31, 1927*

1:00—A Serviceable Abdominal Anus—Chas. J. Drucek, Chicago. Discussion opened by Joseph Hollowbush, Rock Island.

1:30—Gastric Carcinoma—Ben D. Baird, Galesburg.

2:00—Some Phases of Thoracic Surgery—Carl A. Hedblom, Chicago. Discussion opened by Don Deal, Springfield.

2:30—Diagnosis and Treatment of Goiter—Wm. J. Carter, Mattoon.

3:00—Carcinoma of the Thyroid Gland—John De J. Pemberton, Rochester, Minn. (By invitation.) Discussion to be opened by E. P. Sloan, Bloomington.

4:00—Injuries to the Mesentery, With Report of a Case—Carl E. Black, Jacksonville.

4:30—Diagnosis and Treatment of Chronic Duodenal Obstruction—Edwin W. Miller, Chicago. Discussion opened by C. U. Collins, Peoria.

5:00—Foreign Body in the Peritoneal Cavity—G. L. Armstrong, Taylorville.

*Wednesday, June 1, 1927*

8:00—Congenital Pyloric Stenosis—Albert H. Burr, Dixon. Discussion opened by Orville Barbour, Peoria.

8:30—Treatment of Varicose Veins—Edward H. Ochsner, Chicago. Discussion opened by Edward H. Weld, Rockford.

9:00—Congenital Atresia of the Vagina Due to Imperforate Hymen—Mark S. Nelson, Canton.

9:30—Fractures About the Elbow Joint—Philip H. Kreuscher, Chicago.

10:00—Intra and Juxtra Articular Fractures—Henry Bascom Thomas, Chicago.

10:30—Major Points in the Treatment of Common Fractures—Daniel Levinthal, Chicago. Discussion of fracture papers to be opened by Hugh E. Cooper, Peoria.

11:00—Personal Experiences in the Treatment of Defects by the Use of Flaps of Various Kinds—Wm. T. Coughlin, St. Louis. (By invitation.)

*Wednesday Afternoon, June 1, 1927*

3:00 to 6:00—Joint Session of Surgical and Medical Sections for Teaching Clinics. Subjects to be announced.

*Thursday Morning, June 2, 1927*

9:30—Clinical Experience With Meckel's Diverticulum—H. N. Rafferty, Robinson.

10:00—Malignant Tumors of the Neck With Radium Treatment—R. C. Crain, Chicago.

10:30—Phrenectomy—Ralph B. Bettman, Chicago. Discussion opened by Earl D. Wise, Champaign.

11:00—Diagnosis and Treatment of Tumors of the Urinary Bladder—Budd C. Corbus, Chicago.

11:30—Analysis of End Results in Bladder Tumors Over a Period of Eight Years—Vincent J. O'Connor, Chicago. Discussion of both papers to be opened by Arthur Sprenger, Peoria.

SECTION ON EYE, EAR, NOSE AND THROAT

Louis Ostrom, *Chairman*, Rock Island.

C. F. Yerger, *Secretary*, Chicago.

*Tuesday, May 31, 1927, 1 P. M.*

A. DEMONSTRATIONS:

1. Audiometer and Audiograms—A. G. Peters, Chicago.

2. Displacement Irrigation; A Simple Technique for The Introduction of Fluids into the Paranasal Sinuses. Illustrated and Clinical—Arthur W. Proetz, St. Louis. (By invitation.)

#### B. TEACHING CLINICS.

"The Pitfalls in Eye, Ear, Nose and Throat Diagnosis."

##### 1. *Ophthalmic.*

- a. Glaucoma—Harry Gradle, Chicago.
- b. Sympathetic Uveitis—George F. Suker, Chicago.
- c. Irido-cyclitis—Wm. L. Noble, Chicago.
- d. Optic Nerve Lesions—Chas. G. Darling, Chicago.

##### 2. *Otitic.*

The Complications of Suppurative Middle Ear Disease—Harry Pollock, Chicago.

##### 3. *Rhinologic.*

Accessory Nasal Sinus Disease—Arthur M. Corwin, Chicago.

##### 4. *Endoscopic.*

Laryngoscopic, Bronchoscopic and Esophagoscopic—George W. Boot, Chicago.

#### C. THE BANQUET.

The annual banquet of the Section on Eye, Ear, Nose and Throat will be held at 6:30 P. M. at the Country Club. All those expecting to attend the banquet please get in touch with the Secretary of the Section.

*Wednesday, June 1, 1927*

1. Glaucoma Relieved by the Removal of Focal Infection—J. H. Roth, Kankakee. Discussion, G. S. Duntley, Macomb, and J. A. Ascher, Freeport.

2. The Non-Operative Treatment of Glaucoma—Harry Gradle, Chicago. Discussion, Harry Woodruff, Joliet, and M. H. Lebensohn, Chicago.

3. The Iridotomy Operation for Glaucoma; Some Deductions After Eight Years—Michael Goldenburg, Chicago. Discussion, Chas. G. Darling, Chicago, and Edw. F. Garraghan, Chicago.

4. Otologic Aids in the Localization of Brain Lesions—Norval Pierce, Chicago. Discussion, H. C. Ballenger, Chicago, and J. Sheldon Clark, Freeport.

5. Ophthalmic Aids in the Localization of Brain Lesions—George F. Suker, Chicago. Discussion, Walter Stevenson, Quincy, and O. C. Breitenbach, Waukegan.

6. Newer Methods in the Treatment of Chronic Deafness—H. M. Thometz, Chicago. Discussion, H. R. Watkins, Bloomington, and O. J. Nothenberg, Chicago.

7. Physical Therapeutic Methods in Otolaryngology (Illustrated)—A. H. Hollender, Chicago. Discussion, F. L. Alloway, Champaign, and H. G. La Reau, Chicago.

8. Autohemotherapy in Sympathetic Uveitis—A. Vila Coro, Barcelona, Spain (by invitation). Discussion, Wm. A. Fisher, Chicago, and C. B. Voigt, Mattoon.

9. The Pros and Cons of the Various Steps in the Cataract Operation—Harry Woodruff, Joliet. Discussion, W. R. Fringer, Rockford, and Wm. A. Fisher, Chicago.

10. Accessory Nasal Sinus Disease in Children—A. A. Hayden, Chicago. Discussion, Albert H. Andrews, Chicago, and Frank J. Novak, Jr., Chicago.

11. The Choice of a Cataract Operation—Oscar B. Nugent, Chicago. Discussion, Harry Woodruff, Joliet, and Wm. A. Fisher, Chicago.

12. The Position of the Ophthalmologist in the Medical Profession—Robert Buck, Chicago. Discussion, C. B. Welton, Peoria, and Wm. L. Noble, Chicago.

13. Salivary Calculi—James E. Lebensohn, Chicago. Discussion, F. C. Strickling, Decatur, and F. W. Broderick, Sterling.

14. Retrobulbar Neuritis—James P. Fitzgerald, Chicago. Discussion, H. S. Lester, Streator, and T. J. Williams, Chicago.

15. The Auditory Tests With the Audiometer—G. Henry Mundt, and A. G. Peters, Chicago. Discussion, J. Holinger, Chicago, and Harry Pollock, Chicago.

16. Some Features in Bronchoscopy and Esophagoscopy—H. H. Winters, Galesburg. Discussion, Edwin McGinnis, Chicago, and Geo. W. Boot, Chicago.

#### SECTION ON PUBLIC HEALTH AND HYGIENE

H. V. Gould, chairman, Chicago.

A. A. Crooks, secretary, Peoria.

*Tuesday Morning, May 31, 1927*

10:00—The Necessary Foundation for the Health Movement—J. Howard Beard, Urbana. Discussion opened by William S. Keister, Decatur.

10:30—Recent Discoveries in Epidemiology—



W. A. Evans, Chicago. Discussion opened by Isaac D. Rawlings, Springfield.

11:15—The Nomenclature and Classification of Thyroid Disturbances and Their Relation to Iodine Therapy—James H. Hutton, Chicago. Discussion opened by H. V. Gould, Chicago.

*Tuesday Afternoon, May 31, 1927*

1:00—An Innovation in Recording of Vital Statistics for Health Departments—N. O. Gunderson, Rockford. Discussion opened by Arlington Ailes, La Salle.

1:30—Organization of a Whole Time County Health Unit—Herbert L. Wright, Chicago. Discussion opened by S. S. Winner, Chicago.

2:00—Organization and Maintenance of Municipal Health Departments—Arlington Ailes, La Salle. Discussion opened by R. V. Brokaw, Springfield.

2:30—The Coordination of Municipal Health Activities—Wm. S. Keister, Decatur. Discussion opened by J. J. McShane, Springfield.

3:00—Venereal Disease Control—Thomas Parran, Jr., Washington, D. C., Asst. Surgeon General, U. S. P. H. S. (by invitation). Discussion by Louis E. Schmidt, Chicago, and I. H. Neece, Decatur.

4:00—Present Methods of Scarlet Fever Control—George F. Dick, Chicago. Discussion opened by S. S. Winner, Chicago.

4:30—Tuberculosis Control—Robinson Bosworth, Rockford. Discussion opened by Robert H. Hayes, Chicago.

*Wednesday Morning, June 1, 1927*

8:00—The Relation of Industrial Medicine to the Private Practitioner—Frank L. Rector, Chicago. Discussion opened by Hart L. Fisher, Chicago.

8:30—The Relation of a State Child Hygiene Program to the Practitioner of Medicine—Grace S. Wightman, Springfield. Discussion opened by Orville Barbour, Peoria.

9:00—Proper Relationship between the State Department of Health and the Physician—C. S. Nelson, Springfield. Discussion opened by J. W. H. Pollard, Evanston, and L. R. Clary, Pekin.

9:30—Public Health Activities of the Medical Society of the State of New York, Relationship Which Should Exist Between Medical Men and

Public Health Officers—James E. Sadlier, Poughkeepsie, New York, president, Medical Society of the State of New York (by invitation). Discussion opened by E. P. Sloan, Bloomington.

10:30—The Prevention of Measles—Some Results With the Use of Tunnicliff's Immune Goat Serum—Archibald L. Hoyne, Chicago. Discussion opened by Louis J. Halpern, Chicago.

11:00—Immunities, Their Possibilities—J. W. Van Derslice, Oak Park. Discussion opened by J. C. Krafft, Chicago.

11:30—Food Poisoning—Lloyd Arnold, Chicago. Discussion opened by J. J. Moore, Chicago.

SECTION ON RADIOLOGY

E. S. Blaine, chairman, Chicago.

Harold Swanberg, secretary, Chicago.

1. Title to be announced—Preston M. Hickey, Ann Arbor, Mich. (by invitation).

2. Title to be announced—E. S. Blaine, Chicago.

3. Treatment of Recurrent Carcinoma of Breast—B. H. Orndoff, Chicago. Discussion opened by Emil Beck, Chicago.

4. An X-Ray Study of the Effect of Distension of Stomach and Colon on Cardiac Dullness—W. A. Brams and R. A. Arens, Chicago.

5. Title to be announced—F. E. Simpson, Chicago, and R. E. Flesher, Chicago.

6. Duodenocecal Fistula—E. A. Krafft, Danville. Discussion opened by C. R. Morgan, Mattoon.

7. Leukemia, a Case Report—H. W. Grote, Bloomington. Discussion opened by H. B. Magee, Peoria.

8. Some Problems of the Roentgenologist in a Small Community—H. A. Elkins, Mt. Carmel. Discussion opened by W. M. Hartman, Macomb.

9. The Importance of Accurate Dosage Measurements in Intensive X-Ray Therapy—R. T. Pettit, Ottawa. Discussion opened by H. A. Chapin, Jacksonville.

10. Radium and X-Ray Both Essential in Therapy—T. D. Cantrell, Bloomington. Discussion opened by Harold Swanberg, Quincy.

11. Coordinating Radiology With Other Specialties—W. G. Bain, Springfield. Discussion opened by P. B. Goodwin, Peoria.

12. The Radiologic Study of the Pathologic Gall Bladder—P. B. Goodwin, Peoria. Discussion opened by R. A. Arens, Chicago.

13. Value of the Fluoroscope in Surgical Manipulations—V. R. Stephens, Berwyn. Discussion opened by A. H. Parmalee, Oak Park.

14. Title to be announced—E. G. C. Williams, Danville.

15. Use of Iodized Oil in the X-Ray Diagnosis of Pelvic Pathology—Julius Brams, Chicago.

#### COMMERCIAL EXHIBITS AT 1927 MEETING

We believe that this year we will have the best line of commercial exhibits that have ever been shown at a State Medical Society meeting. Each has been carefully selected, and only concerns that are entirely reliable and ethical have been invited to have an exhibit. We hope that all those present at the meeting will look over the entire line of exhibits, and get better acquainted with these reputable houses that have been interested in medical and surgical progress and have made no little contribution themselves to carry on the good work.

H. W. Grimm of Moline will exhibit a complete line of physicians' furniture as manufactured by the W. D. Allison Company of Indianapolis. This will include tables, chairs, cabinets, and other of the more popular types of office furniture. In addition to these, Mr. Grimm will display some X-ray supplies which will be of interest to those doing roentgenologic work.

The exhibit of the Victor X-ray Corporation will feature their line of physical therapy apparatus, including the new portable vario-frequency diathermy apparatus, with a capacity of 4,000 ma. over a selective frequency range of from 500 to 2,000 kilocycles; the Wantz multiple wave generator, for the production of galvanic, surgical galvanic and sinusoidal currents; the Sigmond galvanic controller; air and water cooled ultraviolet quartz lamps; phototherapy lamps and vibratory massage apparatus. A new portable x-ray outfit will also be shown. The trained representatives in charge of the Victor booths will cheerfully assist you in solving your technical problems involving either physical therapy or x-ray apparatus.

The Medical Protective Company will have their representatives in attendance in booth number 45 to answer any questions relative to its service and discuss any points relative to mal-practice insurance that may be propounded by its contract holders or those who are interested in this subject for any reason whatever. Mr. M. L. Allen of the Peoria office and Mr. A. B. Garber of the Chicago office will be in attendance.

Sutliff and Case Company of Peoria will exhibit a representative display of their line of pharmaceutical specialties and standard products of general interest to the medical profession. An extensive line of surgical instruments, medicine cases and bags and many other sundries used in medical and surgical work as well as in the various specialties will be shown.

H. G. Fischer & Company, Inc. of Chicago will exhibit in space number 20, a most complete line of

physical therapy apparatus and electrodes; a distinctly new and extremely powerful diathermy cabinet, a tissue cutting apparatus, a low voltage and wave current generator which is remarkably smooth in action, and their latest radiant therapy lamp as well as quartz ultra-violet apparatus. This company believes its line of supplies and accessories is unexcelled anywhere. Some new electrodes will be shown for the first time at the meeting.

V. Mueller & Company of Chicago will show a representative line of instruments used by the general practitioner as well as the surgeon. Many specialties of their own design will be shown, many of which are used by the eye, ear, nose and throat men, genito-urinary specialists, and the up-to-date men in general. OBSTETRICAL instruments such as are used at the Chicago Lying In Hospital will be exhibited and a catalog of these will be sent to all who request it. Other items to be exhibited are the improved model of their ether vapor vacuum apparatus, the Israel Carmody portable machine, a full line of non-rust instruments and needles, cystoscopes, etc., for G. U. work, including the electrodes designed by Corbus and O'Connor for treating gonorrhoea in the male and female by means of the diathermy current.

The Harrower Laboratory, Inc., Glendale, Calif., extends a cordial greeting to all in attendance at the meeting to visit their exhibit in space number 34. In addition to the regular pluriglandular formulas, a number of new standardized endocrine products will be featured; also a display of fresh glands, photographs showing the processes of manufacture, special literature on endocrine disturbances, etc. Those in charge of the exhibit will be entirely AT YOUR SERVICE.

The Cameron Surgical Specialty Company of Chicago will show the latest ideas in transillumination, direct illumination, improved instrumentation, accurate diagnosis, simplified technique and cauterization. Trained diagnostic clinicians will demonstrate the practical application of Cameron's electro-diagnostic and operating equipment in all phases of major and minor diagnostic operative and therapeutic procedure.

Carlson Brothers, Inc., the house of office supplies and equipment of Moline, Ill., will have an interesting exhibit of office supplies of every sort. Card records and loose leaf records for the physicians and hospitals, filing cases for cards, letters, etc., sanitary metal cupboards, lockers, waste-baskets, cupboards, fire-proof safes, toys made in Moline-Buddly "L" Line-Hex-O-Blox, desks, wood and steel, chairs, costumers, book-cases, typewriters and many other articles of interest to the physician. The orthophonic victrola will be shown. A complete line of unique toys will be on exhibition and sold to those who desire them from the exhibit.

The Lavoris Chemical Company will have their display in space number 39. Most of the physicians in attendance at the meeting probably are acquainted with LAVORIS which has for its active principle the chloride of zinc, in pleasant form and permanent



solution. It offers astringent, stimulating and tonic action in the treatment of inflamed or catarrhal conditions of the mucous membranes. Claims advanced for the preparation have been confirmed through extensive clinical observations. LAVORIS is presented entirely along ethical lines and its success bespeaks professional recognition. To all those calling at the LAVORIS exhibit will be given a liberal supply, or if preferred, it will be mailed after the meeting.

The Abbott Laboratories of North Chicago will exhibit their line of approved specialties and the products of the Dermatological Research Laboratories. Particular emphasis will be placed on amidoxyl, the new treatment for arthritis, calsoma, a neutralizing agent that corrects gastric acidity without producing alkalinity, ephedrine hydrochloride for the relief of asthma. A line of intravenous preparations will be shown, including the Dermatological Research Laboratories' bismarsen, a new organic compound for the treatment of syphilis, metaphen the powerful germicide, neoarsphenamine, the superior product of a reliable laboratory.

The Swan-Myers Company of Indianapolis will feature their pollen extracts. Through their well known botanist, Mr. O. C. Durham, this company has brought together one of the most diverse collections of pollens in the United States. With this especially varied assortment, they have arranged to supply individualistic treatment in the use of which the physician may prescribe the mixture of special pollens which seems to be indicated in the particular case. Other products featured are their 50 per cent dextrose ampoules used successfully in the treatment of vomiting of pregnancy, the infectious fevers and in other conditions where there is a low blood sugar. These ampoules were the first to be approved by the council on pharmacy and chemistry of the American Medical Association.

Hettinger Brothers Company, dealers in dental and surgical supplies, from St. Louis, will exhibit an interesting line of surgical instruments for the general practitioners, surgeons and specialists. Other interesting articles to be displayed are infrared treatment lamps and Victor vario-frequency diathermy apparatus.

Sanborn Company of Cambridge, Mass., will have an exhibit of diagnostic apparatus in booth number 38. The main feature will be the Sanborn basal metabolism equipment, which is ideally suited to either the private physician or large hospital and clinic. Urologists will be greatly interested in the Sanborn-Rose cystometer, a device which has been developed by D. K. Rose of the Washington University Medical School at St. Louis. This device offers an entirely new method of diagnosing various bladder disorders.

The Cilkloid Company of Marshalltown, Ia., will exhibit both the perforated and impervious forms of "Cilkloid." The impervious form will be shown in both standard and double thicknesses. These are largely used for protective coverings over wet applications, ointments, to protect plaster casts, etc. The heavier material is often preferred on account of its greater strength. The perforated "Cilkloid" has been developed by this company to meet the long felt need

for a dressing that does not adhere. While the perforations are large enough to provide for adequate air supply and drainage, they are not large enough to permit the forming granulations to grow through and cause trouble when the dressings are removed. The Cilkloid Company is anxious to have all those in attendance at the meeting visit their exhibit for a thorough examination of their helpful dressings.

Mead Johnson and Company of Evansville, Ind., are showing their line of Mead's infant diet materials, consisting of Mead's dextri-maltose, a carbohydrate to be added to cow's milk modifications; Mead's casein, a form of soluble protein to be added to dilute cow's milk for certain types of sick infants; Mead's standardized cod liver oil, the first biologically assayed cod liver oil to be placed at the disposal of the medical profession, and Mead's reolac, a reconstructed milk. All of these infant diet materials are offered under the familiar Mead policy of advertising them only to members of the medical profession and of printing no feeding instructions on any of their trade packages.

E. R. Squibb & Sons extend a cordial invitation to physicians attending the meeting to visit their booth. The exhibit will include erysipelas antitoxin Squibb, Squibb authorized scarlet fever products, Squibb diphtheria products, insulin Squibb, Squibb arsphenamines and other Squibb biologicals, chemicals and pharmaceutical products. Squibb representatives will be in constant attendance to answer pertinent questions relative to the above or any other Squibb product. The exhibit will be at booth number 42.

The exhibit of Ciba Company, Inc., at the meeting will comprise the well known pharmaceutical specialties of the Society of Chemical Industry in Basle, Switzerland. Among these products are digifoline "Ciba," dial "Ciba," coramine "Ciba," lipoiodine "Ciba," and other products which those who have used them will be glad to see at the meeting. The booklets issued by this company comprising the "Ciba" reference library which have had an unusually favorable reception by the medical profession will be available to those who call at the exhibit. All physicians visiting the exhibit will be given a booklet on the subject which they are interested in, or they will be mailed to your offices. The representatives of Ciba Company, Inc., in charge of the exhibit will be glad to furnish information regarding "Ciba" pharmaceutical specialties and supply an amount for trial to those desiring to test any of these products.

The Charles H. Phillips Company of New York will display their "Phillips" milk of magnesia, which identifies the original milk of magnesia symbolizing unvarying excellence and uniformity of quality. The merit of this product as the ideal laxative antacid is well established and has the endorsement of the medical profession. In addition to "Phillips" milk of magnesia, other dependable Phillips products will be shown. "Phillips" phospho-muriate quinine compound, a dependable reconstructive tonic, "Phillips" dental magnesia, a superior tooth paste based upon "Phillips" milk of magnesia will be on display at the meeting.

All physicians present are requested to visit this booth, number 32, and investigate these products.

Mellin's Food Company, space number one. Appreciating that the real purpose in having exhibits as a part of the annual meeting of the Illinois State Medical Society is to give attending physicians an unusual opportunity to gain information of value, representatives of the Mellin's Food Company will make special effort to place before physicians all details relative to the materials from which Mellin's food is made, an outline of the process of its manufacture and definite information in regard to the amount and character of nutritive elements in the finished product.

The De Puy Manufacturing Company of Warsaw, Ind., takes great pride in the fact that they have a splint adapted to every type of fracture. One of the features of this company's exhibit will be the new combination leg splint made of aluminum, and a considerable number of new splints. Mr. W. D. Bates who represents the Illinois territory will be in charge of the exhibit.

Merrell-Soule Company of Syracuse, N. Y., will exhibit KLIM, Merrell-Soule powdered protein milk, Merrell-Soule powdered whole lactic acid milk and allied products which constitute its group of infant feeding products. KLIM will be served to visiting physicians that they may judge as to its flavor and the attendants will be glad to answer any questions regarding the scientific background and clinical success of each product.

The Physicians and Surgeons Adjusting Association of Kansas City will have representatives in booth number 10 to explain their methods of collecting old accounts, a feature which should appeal to all physicians present at the meeting. They will ask you to read their contract which contains no "jokers" and which everyone can readily interpret without any particular knowledge of law. Officials of the association will be present to greet their old friends and to make new ones.

In booths number 46 and 47 the HANOVIA CHEMICAL AND MANUFACTURING COMPANY of Newark, N. J., will exhibit, as usual, their entire quartz mercury anode type quartz lamps, the ALPINE SUN LAMP, the KROMAYER LAMP and the LUXOR model of the ALPINE SUN LAMP. Together with these they will have on display two different models of lamps, especially designed for particular needs, embodying certain refinements. Competent members of the Hanovia staff will be on hand to demonstrate and explain in detail any of the lamps workings. A cordial welcome is extended to all physicians attending the meeting.

The Manhattan Coat Factory, 3223 North Halsted street, Chicago, will display a complete line of professional garments manufactured by themselves. Among these articles are office coats, operating gowns, interne's suits, operating suits, nurses uniforms, Manco prophylactic aprons and many other similar garments. Those in attendance will be interested in the many articles of wearing apparel made by this firm which

are daily necessities for the physicians and nurses.

The preference for an emulsion of mineral oil for intestinal lubrication will undoubtedly create a great deal of interest in the PETROLAGAR exhibit. The Deshell Laboratories, Inc., will have some interesting material to demonstrate, in a graphic manner, why the emulsion of mineral oil and agar is superior as a lubricant to the plain oil. The representatives in charge of the Petrolagar exhibit will have important data on the clinical application of the various types of Petrolagar, their use in spastic and atonic constipation and in the modification of the SIPPY method of treating gastric ulcer.

HORLICK'S MALTED MILK CORPORATION, Racine, Wis., will occupy booth number 33 and will incorporate in its presentation of Horlick's products, a feature which will be received with enthusiasm by visiting members of the profession. It is announced that throughout the three days of the meeting, Horlick's malted milk (plain and chocolate flavored) will be served. Samples of the product and literature will be given out to those in attendance.

W. B. SAUNDERS' COMPANY will exhibit their entire line of some 250 titles. Of particular importance are a great number of new books and new editions, including Cecil's Text-Book of Medicine, Ford's Bacteriology, Wechsler's Clinical Neurology, Young's Practice of Urology, Rehfuess' Diagnosis and Treatment of Diseases of the Stomach, Wood and Boswell's Health Supervision and Inspection of Schools, the new Mayo Clinic Volume, Kolmer's Chemotherapy, Stokes' Clinical Syphilology, a rewritten edition of Griffith and Mitchell's Pediatrics, Morse's Pediatrics, Arny's Pharmacy and Sollmann's Pharmacology, both rewritten in accordance with the new Pharmacopeia 10th edition of Scudder's Fractures, 2nd edition of Steven's practice of Medicine. A complete line of new and revised books will be available for every practitioner regardless of his specialty or inclinations.

The Heidbrink Company of Minneapolis will exhibit their latest developments in gas-oxygen apparatus for anesthesia. Recent developments in this field render their exhibit particularly interesting since the apparatus shown will include devices for the administration of ethylene and carbon dioxide, two of the new gases that are coming into great prominence. The Heidbrink exhibit will be in charge of Mr. E. H. Clark, a competent anesthetist, who has successfully demonstrated the proper use of anesthetic gases to the hospitals in Chicago and surrounding territory.

## ALUMNI MEETING AT ANNUAL MEETING STATE SOCIETY

JEFFERSON MEDICAL COLLEGE ALUMNI MEETING

A dinner and smoker will be held at Moline, Illinois, at the annual meeting of the State Med-



ical Society. The exact date will be announced later.

FRANK M. PHIFER, M. D.,  
Vice-President,  
Jefferson Alumni Association.

3 W. Madison, St.,  
Chicago, Ill.

#### TO OUR EXHIBITORS

Arrangements have been made by the Committee on Arrangements at Moline whereby your exhibits may be sent to the Crandall Transfer and Warehouse Company, 1205-1209 Fourth Avenue, Moline. This Company will take care of them until your representatives arrive, keeping them in a fire-proof storage warehouse. When you arrive, they will take them to the Elk's Club where the exhibits will be shown, and help you unpack them, if desired. The electric current in the Elk's Club is A.C. 110 Volts, 60 cycles. An electrician will be on the job prepared to do your wiring, a carpenter staff will be present to help you arrange your exhibit, and an experienced sign painter will be there to prepare signs or cards, as desired. The cost for these extra services will be entirely reasonable, and those men present will be men who are entirely competent, and reliable.

If special furniture is desired, it can be arranged for by writing to the Committee on Arrangements, Dr. A. T. Leipold Chairman, Moline Ill. Chairs and tables will be furnished free to exhibitors desiring them. The Society has a competent night watchman on the job every night to protect your exhibits.

Illinois State Medical Society.

#### THE NATION FACES A CRISIS IN THE TENDENCY TOWARDS THE CENTRAL- IZATION OF ALL GOVERNMENT POWER IN WASHINGTON

FEDERAL POWER CARRIES TOO FAR, BAR CHIEF  
SAYS

CHESTER I. LONG TALKS TO ILLINOIS LAWYERS.

Local self-government and individual liberty are in grave danger in this country, and through them the government itself is endangered, Chester I. Long of Wichita, Kas., president of the American Bar association, last December told the justices of the Supreme court of Illinois. He spoke at a banquet given for the judges by the Illinois Bar association in the Drake hotel.

Mr. Long, a former member of congress, warned the lawyers and judges that the nation faces a crisis in the tendency toward the centralization of all governmental power in Washington. He also warned against the recent tendency toward amending the constitution. He said that the forces to oppose those evils are fast gathering and urged his audience to join in the fight.

#### WOULD APPEAL TO CONGRESS

"Let us appeal to public opinion," he urged. "Let us appeal to the legislatures, to congress, and to the courts, that local self-government and the liberty of man, woman, and child shall not perish from the earth.

"We should call attention to the liberty of the individual, which neither the state nor the national government can take away from him. The powers of the states have been steadily decreasing. Local self-government has been impaired. We have a dual form of government. It is the first attempt in history to establish such a government. It should continue as it was made in the beginning.

"In the first 120 years of our national life there were passed only five amendments to the constitution. There have been passed four amendments to the constitution in the last twelve years. And there were 100 more proposed amendments pending when the last session of congress closed. I tell you, gentlemen, we are at a crisis!"

#### TALKS DIRECTLY TO JUDGES

Mr. Long waved an arm toward the roomful of lawyers in front of him and then turned and looked at Chief Justice Frank K. Dunn and Justices Oscar E. Heard, Floyd E. Thompson, Clyde E. Stone, and Frederic R. De Young of the state Supreme court, who sat at the table at which he stood speaking.

Mr. Long, who served one term in the United States senate. Elihu Root, who spoke of the trend toward centralization twelve years ago, before the four new amendments had been added to the constitution. President Coolidge also was cited, Mr. Long pointing to the Arlington address of May 30 of this year:

"From every position of consistency with our system, more centralization ought to be avoided."

#### FEARS FOR PERSONAL LIBERTY

Then he turned to individual liberty. He said that a number of attempts to further cur-

tail the liberty of persons have recently been made.

"It has come to such a pass," he declared, "that there is an attempt not only to regulate actions of persons, but their opinions, their minds, by law."

He pointed to attempts to pass laws in Iowa, Nebraska and Ohio dealing with the teaching of foreign languages in the public schools, of an attempt to abolish private schools by law in Oregon. He said all those were attempts at infringement of the liberty of persons, and the United States Supreme court declared them unconstitutional on that ground.

In those cases the Supreme court thus defined liberty he said: "Liberty denotes not merely freedom from bodily restraints but also the right of the individual to contract, to engage in any of the common occupations of life, to acquire useful knowledge, to marry, to establish a home and bring up children, to worship God according to the dictates of his own conscience, and generally to enjoy those privileges long recognized at common law as essential to the orderly pursuit of happiness by free men."

Finally Mr. Long said: "Liberty has been imperiled by the destruction of local self-government. Let the states resume and exercise the powers reserved to them. Restore liberty by restoring state control over local affairs."

### ILLINOIS STATE MEDICAL SOCIETY SPECIAL TRAIN TO A. M. A. MEETING OVER THE PENNSYLVANIA RAILROAD

#### RESERVATIONS BEING MADE NOW

Arrangements have been made with the Pennsylvania Railroad for the operation of special trains from Chicago to Washington for the annual A. M. A. Meeting to be held in Washington, May 16-20, 1927. Members of medical organizations west of Illinois have been invited to join the special train at Chicago and travel with the Illinois State Medical Society members to Washington. A great deal of interest is being evidenced in connection with the specials and reservations are now being made.

#### SPECIAL TRAIN SCHEDULES

Arrangements contemplate two special trains over the Pennsylvania Railroad. One leaving the new Union Station, Chicago, at 1:00 p.m.,

May 15; the other leaving the Union Station, Chicago, at 1:00 p. m., May 16. The specials will be exact counterparts of the well known Liberty Limited, the crack train of the Pennsylvania Railroad between Chicago and Washington, which makes the run in 19 travel-comfort hours.

#### OTHER SPECIAL SERVICE

For those who, despite their desire, cannot join the special trains and travel with the larger groups of physicians from Illinois and the west, arrangements have been made to provide special car service which will also provide the opportunity of enjoying the club atmosphere and convenience of the special train service.

In addition to the special trains announced above, special sleeping cars will be provided for members of the medical profession on dates and schedules shown below.

#### THE LIBERTY LIMITED

Lv. Chicago, 1:00 p.m. Ar. Washington 9:00 a.m.

May 14, 15, 16, 17, 18, the following morning.

The Liberty Limited is equipped with the most modern type of sleeping, club and observation cars, and dining car serving a seven-course table d'hôte dinner. The train's personnel includes barber-valet, train stenographer, and maid for the ladies.



The Capitol

#### PENNSYLVANIA LIMITED

Lv. Chicago 5:30 p.m. Ar. Washington 4:20 p.m.

May 14, 15, 16, 17, 18 the following morning.



The Pennsylvania Limited provides a daylight ride through the Allegheny Mountains, around the famous Horseshoe Curve, through beautiful bits of mountain scenery, Allegrippus Gorge, The Pack Saddle, Lewistown Narrows, and other points of National interest.

#### REDUCED FARES

Reduced rate of fare and one-half for the round trip has been authorized for our trip to the A. M. A. Convention. When purchasing going tickets at regular one-way fare, be sure to obtain a Certificate from ticket agent to be presented at Convention Headquarters for validation. When validated, Certificates will be honored for purchase of return tickets at half fare. In Chicago and vicinity, tickets will be on sale and Certificates issued from May 12-18. Certificates will be validated at Convention Headquarters in Washington, May 16-20, and honored for purchase of return tickets to and including May 24. Members outside of Chicago should consult their local ticket agents regarding dates of sale and fares from their home station.

The one-way rail fare, Chicago to Washington, is \$27.78; round-trip convention fare, \$41.67.

Pullman fares, Chicago to Washington, surcharge included, are : Lower berth \$8.25; Upper \$6.60; Compartment \$23.25; Drawing-room \$30.

#### NEW YORK

Many of the doctors will desire to visit New York after the convention, and we wish to call attention to the splendid service the Pennsylvania Railroad offers from Washington to New York. Trains run practically every hour. Returning to Chicago frequent Limited trains leave New York daily. As you perhaps know, the Pennsylvania Railroad is the only railroad via Washington to arrive in New York proper, right in the midst of things. The Pennsylvania Station is at 32nd Street and Seventh Avenue, in the heart of New York's theatrical hotel and shopping district.

Side trip to New York may be made at slight additional expense. Side trip fares are as follows: Baltimore to New York \$6.70. New York to Harrisburg \$6.99.

You are of course aware that the privilege of reduced fares is extended to all physicians and their families.

#### MAKE RESERVATIONS EARLY

Reservations should be made as early as possible so that proper accommodations may be provided for all. Address your reservation request to Mr. W. E. Blachley, Division Passenger Agent, Pennsylvania Railroad, 524 Union Station, Chicago, or telephone Mr. C. M. Trueb, Passenger Representative, Central 7200, Local 357. Additional information will be gladly furnished on request.

#### "ON TO WASHINGTON"

#### A. M. A. POST-CONVENTION TRIP TO BERMUDA

Many physicians from Chicago and other sections of Illinois and adjoining states, have made tentative arrangements for a voyage to Bermuda, following the A. M. A. Convention, that will close May 20 in Washington, D. C. This group contemplates leaving Chicago on the Illinois Medical Association Special Train, over the Pennsylvania Railroad, May 15 or 16, or in other special equipment provided by this railroad on their regular trains May 14, 17 or 18.

Plans are to depart from Washington, immediately after the close of the Convention, leaving Washington on the morning of May 21. The remainder of that day as well as May 22, 23 and 24 will be passed in New York City. At noon May 24, passage will be taken for Bermuda, on one of the luxurious steamers of the Furness Bermuda Line. Forty-eight restful hours at sea, and two delightful days on the Island, sailing from Bermuda on May 28, docking in New York again on May 30, entrain for Chicago, arriving there May 31.

Bermuda Islands offer attractions to suit many tastes, which should appeal to members of the A. M. A. and their families. There are splendid 18 and 19-hole golf courses, and tennis courts. All sorts of water sports, including surf and smooth water bathing, fishing and varied types of boating and sailing, as well as horseback riding. The hotels are unexcelled, and every entertainment possible is available.

The estimated expense of this journey, including all necessary incidentals from Chicago and back to Chicago, with the exception of hotel accommodations and meals while attending the A. M. A. Convention in Washington, and meals while in New York, is placed at \$225.00 per per-

son. Lower fares will apply from cities east of Chicago, while higher rates will govern from points west of Chicago, in accordance with rail fares.

Members who prefer to travel independently to the Convention can join our party at New York City on the day of sailing. The all expense rate from New York to New York is \$115.00 per person.

An additional week can be spent on the Island at an estimated expense of between \$60.00 and \$70.00 per person.

At these rates minimum accommodations are given on the steamer between New York and Bermuda. These are comfortable, but a higher type of accommodations can be had at the additional rate provided by the regulation tariff.

If you are interested in this special journey, for further details and information, communicate with the Cosmopolitan Tours Company, 53 W. Jackson Blvd., Chicago, Ill., as this organization has the matter in charge, and all arrangements should be made through its officials.

#### THE SCIENTIFIC SERVICE COMMITTEE REPORTS PROGRESS

Since the last issue of the Journal the committee has received from Dr. Carl A. Hedblom, Professor of Surgery, University of Illinois, School of Medicine, a list of subjects in the various fields of medicine and surgery which can be presented to county and branch societies by members of the faculty of that school. The lists of subjects and speakers are too long to be published in full in this space. They have been sent to every county and branch secretary, to the councilors and general officers of the State Society. Nine subjects are listed in medicine, nineteen in surgery, and two in pediatrics.

Dr. A. A. Goldsmith addressed the Marion County Society at Centralia on March 25 on the subject of "Gall Tract Disease."

Dr. J. S. Coulter met the Iroquois County Society at Watseka, March 1, on the subject of "The Present Status of Physiotherapy." He demonstrated the most useful equipment in that field.

Dr. Harcourt Browne talked to the Coles-Cumberland Society, March 29, on the subject of "Prolonged Labor."

Dr. Don C. Sutton will speak to the Knox

County Society at Galesburg, April 7, on the subject of "Acute Respiratory Infections."

Dr. Morris L. Blatt will talk to the same society on that date on the subject of "Prevention and Treatment of Heart Disease in Children."

April 2, 1927.

JAMES H. HUTTON, Secretary.

#### THE RED CROSS ENGAGES IN MEDICAL PRACTICE IN THE STATE OF ILLINOIS

The Red Cross shows sporadic yet dangerous signs of resuming its post-war attempt to compete with the medical profession in the practice of medicine.

This in the face of the fact that a few years ago the House of Delegates of the American Medical association passed resolutions condemning the activities of the Red Cross in this direction.

Following this resolution's passage by the A. M. A., the Red Cross agreed to limit its activities to emergencies.

However, down in Henry County, Illinois, the Red Cross, in conjunction with a group of Rotary clubs, is "at it again." Their work is through a "Children's Clinic," that cares for juveniles who are crippled. It is estimated that it costs the organization about \$15,000 per annum to do this work.

It seems relevant to cite the results of an endeavor along similar lines that met with dire sequelae a year ago in Knoxville, Tenn. There the Red Cross sought to take over the entire practice of medicine in that city.

So pernicious were the activities on the part of the Red Cross management that there was a general disruption of the profession. In the consequent breach between physicians and civic and philanthropic agencies of Knoxville, harmony became impossible.

Peace was beyond local power. Finally in despair the civic organizations sent a petition to the American Public Health Association to come and straighten out the matter. Naturally enough the doctors had soured on the situation. It was beyond the natural and Job-like patience of this always overwhelmed profession to sit by and see the health of the city and the welfare of the ill and ailing jeopardized by the egotistical antics of



"Man, proud man, dressed in a little brief authority

Pays such fantastic tricks before high Heaven  
As makes the very angels weep."

Time was wasted while the tangle was unravelled. A plan of procedure presented by the American Public Health Association satisfactory both to the medical profession and to the citizens of Knoxville, simply let the Red Cross out the side door. By the plan, the American Red Cross was eliminated entirely from dictation of medical practice and medical practitioners and from the very act of medical practice that the Red Cross was attempting; care of the sick was placed again with the medical profession where such responsibility and protection belongs.

After this resolution was passed by the A. M. A. and after the Knoxville experience it was hoped that the Red Cross had settled down to mind its own business. Evidently such observation of the eleventh commandment is not in the Red Cross text-book.

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#### SUMMER CLINICS, CHICAGO MEDICAL SOCIETY, 1927

Announcements and schedules will soon be ready for the 1927 Summer Clinics of the Chicago Medical Society, supported by many of the largest hospitals in the city, among them being the Post Graduate Hospital, Chicago Memorial Hospital, University of Illinois College of Medicine, Cook County Hospital, Michael Reese Hospital, Mercy Hospital, Presbyterian Hospital, Jackson Park Hospital, St. Luke's Hospital, Ravenswood Hospital, Mount Sinai Hospital, Francis Willard Hospital, West Suburban Hospital, Evangelical Hospital, North Chicago Hospital, Chicago Lying-in-Hospital, St. Joseph Hospital, Alexian Brothers Hospital, Laboratory of Surgical Technique, Washington Park Hospital, Jackson Park Hospital, Chicago Municipal Tuberculosis Sanitarium, John B. Murphy Hospital. Several of our large laboratories have also agreed to co-operate with us in this great work.

In 1926 we limited registrations to physicians living in Illinois, but our increased facilities make it possible to accommodate many more than last year. Registrations therefore will be open to physicians from other states and to as many as may be accommodated in the order of their

registrations. Registration fee will be \$10 for each two weeks course, payable at time of registration, and a physician may register for only one course of two weeks.

Admission will be by card only, issued by the Chicago Medical Society and no registration card will be issued until registration fee is paid.

The first two weeks course will begin on Monday, June 13th, 1927, at 9 a. m., ending Friday, June 24th.

The second two weeks course will begin on Monday, June 27th at 9 a. m., ending Friday, July 8th.

This is an excellent opportunity for the medical men of the country to obtain real post graduate work in some of the best hospitals in the world, and from some of the best clinicians found anywhere.

Schedules will be sent to the 10,000 physicians in Illinois, and announcements will be sent to the American Medical Association, and the several state medical journals.

We will probably be unable to accommodate all those desiring this wonderful clinical course, so it behooves those in Chicago and Illinois to register early if they desire to take advantage of this year's summer clinics. Last year our registrations closed one week after the first announcement.

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#### LOOSE TALK BY PUBLIC OFFICIAL DIRECTED AGAINST MEDICAL PROFESSION IS BOTH UNJUST AND UNTRUE

##### MEDICAL PROFESSION IS NOT RESPONSIBLE FOR DRUG ADDICTION

To make the medical profession the national scapegoat seems to be the current favorite indoor sport. Every ill from the alleged operating for fees instead of for ailments to the manufacture of drug addicts is placed without rhyme and reason at the doors of the medical profession. Such false and unjustified slander against a body of self-sacrificing, overworked and on the whole, underpaid professional men should be stopped.

The latest slinger of vilification that is both contrary to fact and harmful to the health welfare of the public in that it creates distrust of the most essential profession in the world is a judge of the United States Federal Court of Illinois.

Speaking before the Taylorville Rotary Club at Taylorville, Ills., on Feb. 28, according to the

*Taylorville Daily Courier* of March 1, 1927, Federal Judge Fitzhenry of Bloomington, Ill., said: according to this paper, "that 2,500,000 addicts in the United States were made by the practise of medicine."

It would be interesting to know where Judge Fitzhenry gets his figures. Examination of numerous surveys made during the past decade show that Judge Fitzhenry is far and away ahead of any number of estimates, all of which were open to criticism through many inevitable factors entering into their calculations.

L. G. Nutt, chief of the narcotic division of the United States on Dec. 11, 1926, estimated that there were 100,000 addicts in the country. As this is Chief Nutt's especial field of investigation it would seem that he would be better able to give the number of addicts in the United States than any other man. Mr. Nutt in giving this estimate before the House Committee on Appropriations added that his "estimate was based on a survey by 300 field agents engaged in this work, who mingled with the underworld and consulted physicians and city authorities and others."

Mr. Nutt added that 98 people are employed in the anti-narcotic work at the headquarters at Washington, and the total number of employes there and in the field is 333: that last year they had brought about 5,120 convictions, with total collections from the violaters of the law, including fines of \$981,739.

May 23, 1924, *Public Health Reports*, in a brochure,

"The Prevalence and Trend of Drug Addiction in the United States and Factors Influencing it," quotes from surveys of the States of Tennessee and Pennsylvania and from the United States Army and the Treasury report. The maximum probability of drug addicts in any of these findings was placed at 269,000 or about ten per cent of the statement of Judge Fitzhenry.

Mr. Nutt's estimate of course is less than one-twenty-fifth of what the Bloomington judge lays upon the country's population.

In the Tennessee survey made by Lucius P. Brosn, State Food and Drug Commissioner, as he was able to register 2,370 addicts he estimated the maximum number as not exceeding 5,000 in the state. Using these figures as a basis he estimated 215,000 in the entire country.

The treasury department survey under the

secretary of the treasury, conceded the most comprehensive survey made up to that time; claims there were not over 237,655 addicts in the United States.

The Pennsylvania survey was made under the State Bureau of Drug Control. As in five years this bureau collected the names and addresses of drug addicts in Pennsylvania and obtained less than 9,000 names, the chief of the bureau estimated that there were not more than 20,000 addicts in the state; that on this basis there would be approximately 242,000 addicts in the United States.

The United States Army findings were based on a survey of all men in the draft age and found there were only 3,284 drug addicts. If the army rate is applied to the entire United States based on the 1920 census there would be approximately 99,500 addicts.

Clinical reports were made by revenue agents of the 44 clinics supervised by the internal revenue department 34 of which contain statistical information on addiction in large cities in California, Connecticut, Georgia, Kentucky, Louisiana, New York, North Carolina, Ohio, Rhode Island, Tennessee, Texas, and West Virginia.

These clinical statistics show that there were 4,123 addicts in 34 cities having a total population of 4,182,952 or 0.98 addict per 1000 persons. At this rate there would have been in America 104,300 addicts in 1924.

New York City clinic not included in the cities in states above mentioned registered 7,464 addicts. Using the 1920 census as a basis of computation the New York City rate would give approximately 140,000 addicts for the entire country.

Applying the New York rate to the entire country would be absurd. New York is the largest port of entry in the United States and is the clearing house for the whole world and naturally the percentage of addiction in New York far exceeds that of any other city and applying the same yard stick to New York as to other sections of the country is ridiculous.

Using the U. S. *Public Health Reports* of "May 1924" yields the maximum estimate 269,000 and a minimum estimate of 99,500 addicts in the U. S. with various estimates between these two figures.

Mr. Nutt added, "Of the hundred thousand



non-medical addicts in this country, and by non-medical addicts I mean addicts that take it simply to gratify the habit, nearly all acquire their supply through bootleg channels because the doctors will not prescribe it except occasionally."

Although the usual disposition of the addict is to shift the responsibility for his affliction to others, and to justify himself for his habit, less than one per cent, claim the addiction is due primarily to physicians eventuating from a necessary treatment for disease.

Let it be repeated, that according to statistics and surveys the United States government officials and health departments unite in the finding that physicians play an inconspicuous part if any in the causation of drug addiction.

### Correspondence

#### JUDGE FITZHENRY REPUDIATES TAYLORVILLE NEWSPAPER

As we were closing forms for this issue we received the following from Judge Fitzhenry relative to his talk on the narcotic situation:

#### UNITED STATES DISTRICT COURT

Southern District of Illinois

Bloomington, Ill., April 2, 1927.

*To the Editor:*

I regret that a Taylorville, Illinois, newspaper, in its report of a speech I made there February 28th, put me in the light of charging the narcotic addiction in the United States to the medical profession. I did not and do not now charge that responsibility. I yield to no man in my respect for the medical profession.

By my remarks that evening I was endeavoring to stimulate the desire and a demand for local law enforcement as distinguished from Federal. I did criticise the State for failing to eliminate certain convicted unworthy persons from the exercise of licenses to practice medicine and its failure to regulate the sale and use of narcotics, in justice to legitimate practitioners and the people.

LOUIS FITZHENRY,  
Judge.

### A BOUQUET OF COMPLIMENTS

The following communication was presented to the council of the Illinois State Medical Society by the secretary of the organization at the February meeting.

By unanimous vote of the council it was ordered published in the JOURNAL without consent of the editor.

H. M. C.

*To the Editor:*

One of the duties of the State Society Secretary is taking care of the renewals of subscriptions for the JOURNAL from those who are not members of our Society. In the course of each month we receive many complimentary letters, and in all fairness to the members of our Society, I believe you should know what many of these subscribers outside of Illinois think of the JOURNAL. I have before me approximately fifty letters, and would like to quote from a few of them to show the appreciation of your efforts as Editor of the ILLINOIS MEDICAL JOURNAL. These quotations are taken from a few of these letters and are recorded in the words of the writer:

1. "I consider your JOURNAL the most progressive scientific journal published. It gives you an insight to everything medical and at the same time is never extreme. It gives more space to the interest and progress of the Medical Profession than any other journal published."

2. "I appreciate the JOURNAL very much. It is the best medical journal that I receive."

3. "The JOURNAL is appreciated greatly by the 200 or more physicians who visit our library."

4. "There are so many good things in your JOURNAL and it stands for a higher standard of medical ethics. I want it to continue coming to me, so enclosed find check," etc.

5. "The editorials are most interesting and illuminating, especially those upon the proposed Child labor amendment, Sheppard-Towner and Kollantai propaganda. Keep up the good work."

6. "Permit me to emphasize my appreciation of my name on your mailing list for the ILLINOIS MEDICAL JOURNAL. I believe it the best State Journal published and I think ours is second, which we mail you monthly."

7. "We thank you for the ILLINOIS MEDICAL JOURNAL and for the fine spirit that permeates its editorials. Among the many medical jour-

nals that come to my desk it is refreshing to have one that has the courage to openly stand in the defense of the physicians as a whole, trying to do something for each man in the rank and file, and not afraid to say so, especially when the so-called leaders of the profession are sacrificing the interest of the profession as is too often the case."

8. "For some time I have been following the editorials in the ILLINOIS MEDICAL JOURNAL. I write to say that they are of an unusual character. You present in a forcible and interesting way subjects the profession must consider earnestly and seriously."

9. "It would be a genuine loss not to receive the ILLINOIS MEDICAL JOURNAL regularly. Those who get it must feel as I do that there is no medical journal in its class in the country. Your campaign against Sheppard-Towner Maternity Act, and Birth Control alone, not to mention your work for the past seven years has cheered me."

10. "The profession of the state of Illinois is certainly to be congratulated for having such a JOURNAL so ably edited."

11. "I have often quoted your JOURNAL in my efforts to help strengthen and broaden the attitude of members of our profession in my own state and elsewhere, where I have had the privilege of speaking."

12. "I have appreciated your fight against spurious medical legislation, and have also greatly enjoyed Dr. Neal's letters."

13. "I much enjoy the picture of Mid-Western medical thought and the freedom of the editorials."

14. "I want to express my appreciation and admiration of your JOURNAL. The editorials and articles of different kinds appearing in your JOURNAL in condemnation of certain propaganda and certain paternalistic movements seeking to be foisted upon the medical profession by state and national governments are well worthy of commendation. Our profession in this city stands as a unit in endorsing your position."

These are only a few of the many expressions of commendation of your work and efforts, and I hope you will publish this so that other members of our Society will know that through your work as Editor the Illinois State Medical So-

ciety's service is not limited to the borders of our own state.

Yours very cordially,

HAROLD M. CAMP,

Secretary, Illinois State Medical Society.

March 12, 1927.

### THE TRAINED NURSE PROBLEM

Galesburg, Ill., March 23, 1927.

*To the Editor:* Your recent editorial on the above captioned, which appeared in the ILLINOIS MEDICAL JOURNAL for February, has attracted my attention, because it either contains numerous mis-statements or the nursing conditions in Chicago are very different from that which prevails here in Galesburg, and speaking from an experience of thirty-two years practice, and the employment of hundreds of nurses from all parts of the country, I'm inclined to believe that your statements are not entirely fair to the nursing profession.

Your editorials for years have occupied a high place in medical literature, for their clearness and conciseness, and therefore your recent comment on the trained nurse problem arouses more than usual interest, and were it not so completely at variance with my own lengthy experience I would probably accept it, hook, line, and sinker, but I believe

Your comparisons are poorly drawn.

Your ideas concerning the character of service given by trained nurses are erroneous.

And, your deductions are illogical.

The trained nurse is no more responsible for the present condition of high charges than she is for the existence of the automobile or the low price of farm products.

The trained nurse, with the hospital, is an adjunct of the medical profession, and each must keep pace with the other if harmonious progress is made.

The efforts of the so-called leaders of the medical profession in the last decade or two, to standardize everything and everybody in connection with the profession, from the high salaried hospital Superintendent to the emasculated head of the diaper washing department, has had much to do with the present cost of illness to the patient.

The standard of entrance requirements for the trained nurse has been raised, and the time of



service (which is paramount to servitude without pay), has been increased from twenty-four to thirty-six months (and some of the "leaders" are talking sixty months).

Expert laboratory technicians are made of them, and many physicians, who graduated twenty-five or more years ago, actually depend upon the trained nurse to properly interpret their laboratory findings and suggest treatment.

The much vaunted philanthropy of doctors is more mythical than real. I am convinced of this after many years of a fairly active practice.

The accounts a doctor can't possibly collect are credited to charity, after the statute of limitations bars further proceedings.

If this were not true, why does Chicago maintain a staff of one hundred City Physicians to care for the poor?

And, if they are well paid, satisfied, and prosperous, why did they recently organize and join the Federation of Labor?

If you think doctors do not have "hours off," try and get one (anyone in your neighborhood) after 10 P. M.

Can you say this of a trained nurse on duty? Not in our experience. When employed on a case she is on call about twenty-one hours a day. And, if there is any greater mental or physical stress than caring for a person who is sick in body and in mind, I have no knowledge of it.

The railroads, Henry Ford, and other large employers of labor, long ago sensed the value of recreation among their employees. And no railroad man is now permitted to continuously be employed beyond sixteen hours.

The State Legislature has prohibited clerks, stenographers, etc., from being employed continuously in stores and offices for more than eight hours per day, yet many of them enjoy salaries which compare favorably with the income of nurses.

Yet a highly trained nurse is expected, yea, demanded, to sell herself to a patient for twenty-four hour day, or as much of it as her strength of mind and body can endure, with a grudging three hours off.

Is it any wonder that "what was formerly a distinct adjunct to the medical profession is split into a dozen specialties and with increasing attention to management, and decreasing attention to individual service?"

They are only following the lead of their instructors, the doctors, and who can blame them for this exercise of good judgment? A nurse spends as many months in training as a medical student does in medical college, and like him, must pass the examination before the State Board of Education and Registration, for a license to practice her profession, but here the analogy ends. He flares forth with no restrictions as to fees, or hours of recreation.

She goes to soothe and comfort his restless patients, to stand as a buffer between him and them, to advise him of any unusual symptoms, or peculiar idiosyncrasies she has discovered, and to act in an emergency, and above all to be loyal to the doctor. And many a patient has been converted from a state of doubt to one of confidence, by her astuteness and wisdom. She may have dependents, but rarely does she see them until the case is ended.

Her uniforms and other clothing may need attention, but a twenty-four hour day doesn't allow time for repair work.

She may have a sweetheart, but how can she compete with an eight-hour stenographer?

Her back may ache, her heart may break, but always, "she must be clothed in the habiliments of a smile," regardless of her patient's peevish insults, or the doctor's gruff ingratitude.

A fairly careful investigation convinces me that the average trained nurse can not devote more than 60% of her time to working at private duty, or  $7\frac{2}{3}$  months per year, about \$1,600.00, or \$125.00 per month per annum.

Unlike doctors, nursing ethics do not permit them to increase their fees when they have a plutocrat for a patient, as I understand one surgeon in Chicago did, who charged a wealthy patient \$20,000.00 for a surgical operation. It would be of interest to know his attitude towards the nurse, had she made a weekly charge of \$1,000.00.

Had she been permitted to do this, it may be, she would have given some pauper patient an equal amount of service and thus helped to equalize the cost.

Or maybe, still following the lead of her illustrious instructor, she would have seen her patients only at 2 o'clock Wednesdays.

Hospitals, too, are not entirely blameless for the high cost of illness. They have elaborate, ex-

travagant rooms for the rich, the price of which makes the average nurse's fee look like a piker.

I once enjoyed (?) one of these for a short time following a tonsillectomy, to the tune of \$15.00 per day. My nurse's fee was \$8.00 per day. I would have done as well in a hotel, at a saving.

I haven't noticed any complaints about *this* element of expense to the sick.

Personally, I do not see how anyone can afford to go to a hospital in Chicago. I'm informed that a patient, by appointment with his doctor, entered a prominent hospital for a metabolism test by an interne. He spent about three hours in the institution, and was charged \$30.00.

A few years ago I went with a patient to see a prominent Chicago surgeon, and the valuable stenographer said, "That will be \$25.00 please." I thought that was a pretty steep entrance fee, and gave her my card, whereupon I was admitted to his august presence. I have always been glad I wasn't a patient seeking *his* advice.

If the profession is really sincere, in reducing the cost of illness to those who are neither plutocrats or paupers, let them first take the beam out of their own eye, before seeking the moat in the eye of their most valuable helpers.

Efficiency comes high.

Would we be satisfied with less efficient nursing?

Human endurance has a limit.

Shall we demand the limit from our right hand?

A life's devotion to an avocation should promise to yield a competency.

Is it our desire to grant the followers of Florence Nightingale less?

BEN. D. BAIRD.

#### THE MEDICAL LEGISLATIVE SITUATION AT SPRINGFIELD

March 30, 1927.

The most interesting occasion in the last two weeks in the Legislature has been the Osteopathic controversy before the Efficiency and Economy Committee of the House.

There were two bills introduced: one defining Osteopathy, and the other creating a special Board for Examiners.

March 16th the Bills were heard before the

Committee—the Osteopaths took more than two hours to put in their ideas concerning the necessity of special Legislation. The opponents were not heard on that day.

March 23d on account of the large lobby of Osteopaths that came to Springfield—more than 150, so it is reported—the postponed meeting of the Committee was held in the House of Representatives.

The Osteopaths were allowed forty minutes to conclude, and the opposition was offered a like amount for its side of the story. At the end of forty minutes Mr. Lilienthal, their attorney, plead for more time, and the Chairman of your Legislative Committee graciously gave him ten minutes of our forty minutes to conclude. This made a total of two hours and fifty minutes that the Osteopaths took to put in their side of the question, and your Chairman talked thirty minutes against the Bill.

The Roll Call was then taken and although we defeated each proposition in the Committee, the vote was very close—only one majority in our favor on both issues.

Not to be entirely outdone, the Osteopaths marched over to the Senate, and introduced there the identical two Bills, originally introduced in the House, and they are now pending before the Public Health Committee of the Senate.

On the same evening that the Osteopath's meeting was to take place, there was a meeting of the Public Health Committee of the Senate, and it was the intention of the Committee to consider all Bills then pending, which included two amendments to the Medical Practice Act; two Chiropractic Bills; four special drugless healer's Examining Board Bills; a Masseur Bill; a Sanatologist Bill; and two Osteopathic Bills.

Quite a large lobby of drugless healers, other than Osteopaths, were down from Chicago ready for the fray, but just as the Committee was called to order Senator Starr from Chicago, champion of most of their Cult Bills this year, asked that consideration on the Chiropractic and Drugless Healer Bills be withdrawn temporarily on account of the effort being made for the different drugless healers to consolidate their different opinions regarding Legislation.

This was a very smart political trick because the atmosphere of the State House was none too good for the drugless healers that evening,



inasmuch as the Osteopaths had been decisively beaten in the House.

The Chiropractors are in a turmoil, and there are three distinct groups now battling for honors in the present General Assembly.

The Masseurs are clamoring for special recognition although they have not a school in existence, but, nevertheless, they feel that they should be registered.

Senator Starr of Chicago has put in more Cult Legislation this year than any other person in the last several Legislatures. It is quite apparent that some additional consistent work should be done in his district regarding the way he is running wild on attempting to get every drugless healer safeguarded by his own particular law.

The following are the members of the Public Health Committee of the Senate, and certainly some very hard efforts should be made by every doctor in the district where the respective member resides, bringing every possible pressure to bear on him not to allow any of the eight or ten attempts now pending before that Committee designed to lower the educational requirements for those who seek the privilege of treating the sick in the State of Illinois:

Mason, Lowell B. (Chairman), Oak Park.  
 Barbour, James J., 5 N. LaSalle St., Chicago.  
 Boehm, John J., 729 W. 18th St., Chicago.  
 Bohrer, Florence F., Bloomington.  
 Carlson, Martin R., Moline.  
 Hughes, Edward J., 3339 Fulton Blvd., Chicago.  
 Joyce, John T., 227 W. Oak St., Chicago.  
 Kessinger, Harold C., Aurora.  
 McDermott, Frank, 1552 W. Garfield Blvd., Chicago.  
 Swift, Rodney B., Highland Park.  
 Wright, Harry G., De Kalb.

The License and Miscellany Committee of the House, before which there are some additional bills of a like nature pending, has not set a definite time for a hearing.

Your Committee wishes to acknowledge the fine cooperative spirit that we are getting from practically all the medical men this year. However, there are still members of the License and Miscellany Committee who have not been seen by the medical men of their district, and there

is really a great danger of the bills in that Committee being reported out favorably.

J. R. NEAL, M. D., Chairman,  
 Legislative Committee.

Monmouth, Illinois, March 29, 1927

#### DEATH OF DOCTOR KING

The Illinois State Medical Society suffered a great loss a few days ago in the death of our loyal friend Clarence Bruce King. For many years he has been chairman of the Medico-Legal Committee, and in that capacity has acted most faithfully, energetically and efficiently. On account of the loss of our chairman of the Medical-legal committee, the President of our Society has appointed Dr. J. R. Ballinger, 2724 West North Avenue, Chicago as temporary Chairman to act in that capacity until the next meeting of the House of Delegates in Moline.

Dr. Ballinger has been a member of the committee for a number of years and is thoroughly prepared to care for our interests in the capacity of chairman. It is hoped that all County Society Secretaries, and County Society "Advisors" to the Medico-legal Committee will make a note of this appointment, so there will be no confusion or interruptions in the work of the organization.

Yours very cordially,

Harold M. Camp,  
 Secretary, Illinois State Medical Society

#### TEACHERS SHOULD BE VACCINATED

Effingham, Ill., January 29, 1927.

To the Editor: Inclosed find a clipping from the *Flora Journal-Record* of January 27, which I thought might interest you.

The idea appeals to me as being a good one, although I never saw it in the form of a resolution before.

C. H. Diehl, M. D.

#### IOLA CITIZENS ADOPT RESOLUTION ON TEACHER VACCINATION

Iola, Ill., Jan. 26, 1927.

At a mass meeting of citizens of Iola, the following resolution was adopted:

To the General Assembly of the State of Illinois:—

*Be it—*

*Resolved,* By the people of The Village of Iola,

Illinois, and Larkinsburg township, that a law should be passed by the State General Assembly requiring that any one, before being eligible to teach in any public or private school in the State of Illinois, must furnish the County Superintendent of Schools in the county in which he or she expects to teach, a certificate signed by a physician, stating that he or she has had small pox or had been successfully vaccinated within five years.

*Whereas*, Small pox is a menace to the public health, we, the citizens and Board of health of Iola and Larkinsburg townships ask that the foregoing resolution be passed and be added to the Laws of the State of Illinois.

*Be it further*

*Resolved*, That a copy of this resolution be sent to the Hon. R. J. Branson, a member of the present General Assembly, and to the Department of Public Health of the State of Illinois.

#### CRIPPLED CHILDREN CLINICS

Kewanee, Ill.

February 2, 1927.

James H. Hutton, M. D.,  
Chairman, Scientific Service Committee,  
6050 Cottage Grove Ave.,  
Chicago, Illinois.

Dear Doctor Hutton:

Replying to your letter of January 28 relative to Crippled Children Clinic, will say that Henry County Medical does not hold a regular meeting until May and as the President, John H. Oliver, is in California, I don't feel at liberty to pass on the proposition myself.

Then, in the second place, the crippled children in this community are well taken care of through the Rotary and Red Cross organizations; they hold a clinic every sixty days that is in charge of Dr. East. I called on Mr. Baker yesterday and talked the matter over with him. He had no objection to our society holding a clinic but, as I get it, they are under contract with Dr. East by the year. He told me he was very willing for any organization that could handle the proposition to take it over as it was costing the crippled children organization about \$15,000.00 a year to carry on as they are. They are holding clinics every sixty days in the following towns with the exception of Springfield where they are held weekly: Aurora, Anna, Cairo, Clin-

ton, Champaign, Chicago Heights, Danville, Decatur, Elgin, Springfield, Galesburg, Greenville, Kankakee, Kewanee, Litchfield, Lincoln, Metropolis, Moline, Marion, Mt. Carmel, Ottawa, Princeton, Pekin, Rochelle, Rockford, Rock Island, Waukegan and Herrin.

My suggestion would be, if your committee desires to get in this work, to start up in some county where the work is not being done and then gradually work into these other organized centers. My personal feelings about local conditions are that with the organization they already have here it would be hard to break in unless they were interested to give it a trial, which they are not now.

Awaiting further information from you, I remain,

Sincerely yours,

(Signed) P. J. McDERMOTT,

Secretary, Henry County Medical Society.

#### INFANT WELFARE SOCIETY PRACTICING MEDICINE

Chicago, Ill., March 26, 1927.

*To the Editor*: I am enclosing copy of a letter from Mr. H. L. Wells, Chairman, Finance Committee of the Infant Welfare Society of Chicago, together with my reply.

I read these two communications at the Physicians' Fellowship Club last night and it was unanimously voted that they be submitted for publication.

EMMET KEATING.

#### INFANT WELFARE SOCIETY OF CHICAGO

308 North Michigan Ave.

March 10, 1927.

Dr. Emmet Keating,  
2758 Fullerton Ave.,  
Chicago, Illinois.

Dear Dr. Keating: What can we say that will make you understand the necessity of the Infant Welfare Society in Chicago—an organization built on the proposition that it is better to have strong children than weak ones, better to spend a little money now in prevention of sickness than thousands later for care of the manifold ills—physical, mental and moral—that are directly attributable to sickness. The old idea was to cure social ills; the goal now is to prevent them.

The Infant Welfare Society through its corps



of doctors and nurses at 23 stations in the congested districts of Chicago and by follow-up visits of nurses in the homes is helping the handicapped mother to bring up healthy children. Some day these children are going to take their places among Chicago's desirable citizens instead of starting life with handicaps, easy to overcome now but incurable if allowed to go uncared for.

There is no argument that can stand against work of this kind. Backed by the pleas of thousands of needy mothers and a record of years of accomplishment we write you to become a member of our society and to contribute what you can to its support.

Sincerely,

H. L. WELLS,

Chairman, Finance Committee.

Ten dollars will save a baby's life for one year.  
Will you help?

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March 26, 1927.

Mr. Lucius Teter, President,  
81 W. Monroe St.,  
Chicago, Illinois.

Dear Mr. Teter:

I am in receipt of a letter from Mr. J. L. Wells, Chairman, Finance Committee, Infant Welfare Society of Chicago. He begins by asking me what your Society can say that will make me understand the necessity for the Infant Welfare Society of Chicago.

The first thing that I will say is that it is a gratuitous insult to the medical profession to insinuate that physicians, one and all, are not interested in the physical, spiritual and mental welfare of all children. Ignorance pertaining to the better care of children is not of the medical profession. It is an ignorance of the people. The Infant Welfare Society is trying to overcome this ignorance by educating mothers to keep away from their neighborhood physicians and giving the impression that the physicians employed by the Infant Welfare Society are highly competent.

Second, the American Medical Association is devoting a great deal of attention and spending money in an effort to educate the people in matters of health. This education includes the care of infants and children. Some years ago the Illi-

nois State Medical Society raised the dues of its members in order to provide a fund for lay education in matters of health, which of course, includes and emphasizes the care of infants and children.

There are two things necessary to the making of a competent neighborhood physician: 1. Professional attainments. 2. A sufficient number of patients to whom he may apply his medical knowledge. The Infant Welfare Society is depriving the neighborhood physician of patients that should be going to him. Another mistake the Infant Welfare Society is making, is having stations in districts of our city where practically all of the people are well to do, have comfortable homes and by no stretch of the imagination can be considered wards of charity.

I would also call your attention to the number of beautiful bank buildings in the most congested parts of Chicago, in those districts which are the great feeders of medical charity organizations. These banks are doing a splendid civic service. They are teaching the people in their communities to be thrifty and to develop a sense of responsibility for the future. They are not performing this valuable service by giving money away or loaning it without interest. The Infant Welfare Society can no more hope to have the friendship of the medical profession than could an organization that would loan money to all classes of people without interest, expect to have the friendship of the banks. There is no more reason why people should have free medical service than there is that they should have free coal, free rent, free gasoline or any other of the necessities or luxuries of life.

In conclusion, the Infant Welfare Society would be doing the babies and children a real service if they would devote their time to a campaign of education that would prove to the parents that the good health of their babies and children can be properly protected by regular weekly or monthly visits to their family doctor, who will arrange the cost to fit the circumstances and who is always ready and willing to do charity where it is deserved.

EMMET KEATING,

Chairman, Public Policy Committee,  
Illinois State Medical Society.

## FLAGRANT CHARGES BY MEDICAL LEADERS STULTIFY THE ENTIRE PROFESSION

The following report from the chairman of the Legislative Committee of the Illinois State Medical Society should be read and carefully digested by every member of the medical profession. Theory and practice do not always jibe, it is the soldier in the trenches that can best appreciate the handicap under which the man is asked to serve the interests of his country. The man who directs medical legislation at Springfield is in the best position to tell us how the medical profession is handicapped in the legislative halls, what factors enter into prevention or enacting medical legislation in the interest of the public. The following from Dr. Neal is highly illuminating:

Springfield, Ill., March 8, 1927.

"In all the years that the writer has been a member of the Legislative Committee for the Illinois State Medical Society, never has there been such a consistent 'razzing' as I have received in the last two weeks in the Legislative Halls, and the odd thing about it—it is not from the vote-seller or from the small calibered Legislator. Some of the biggest men in the Assembly—men who have always voted for us, and consistently stood behind us, are coming to me with doubts in their minds as to whether the Medical Practice Act is really fair or not. They say that for years they have been told by the Cultists that the Medical Practice Acts, which demand so many years and so much money, are made only to protect the wealthy man's son who is able to gain an education.

"Two Legislators had the different sayings of Dr. Bevan and Dr. Wilbur and Dr. Mayo quoted from the last meeting of the A. M. A. Educational Committee held in Chicago the middle of February. One particular phrase that seems to be going around the most is the statement made by Dr. Bevan in which he says 'The drift of the Medical faculties is toward senility.' Dr. Mayo comes out and advises a shorter course for Medical men which they say is exactly what the Cultists have been 'hollering' about for ten years. And then, a very prominent Legislator showed me a letter that he had received from an Osteopath in which was a purporter quotation from the *Chicago Tribune* regarding Dr. Bevan's talk as follows: 'For the most part the Medical cur-

riculum is static, rigid, and shot full of antique methods, ideas and procedures.'

"All these things we see chronicled in the daily press, and it is, indeed, unfortunate and I can see a great deal of opposition arising, which is going to cause the Society more than ordinary trouble, in defeating the Cult bills which are now pending and those yet to be introduced. It is going to call for a greater individual effort, than has been expanded in the past, from each member of the Society. It is really a shame that one man, even though he may be outstanding in the profession, should be allowed to make such flagrant charges which tend to stultify the entire profession. These ideas hurt and really confuse men who are very anxious to go along with the Illinois State Medical Society Legislative program."

John R. Neal M. D.

Chairman Legislative Committee  
Illinois State Medical Society

## CONSTRUCTIVE SUGGESTION TO DR. BEVAN ON MEDICAL ETHICS FROM THE McLEAN COUNTY MEDICAL SOCIETY

Bloomington, Ill., March 24, 1927.

Dr. Arthur Dean Bevan,  
122 South Michigan Avenue,  
Chicago, Illinois.

Dear Doctor Bevan:

We wish to present to you some arguments in regard to a point in medical ethics, that while not specifically stated in the code of ethics of the A. M. A., yet one which has been established and observed by the profession in downstate Illinois for many years. We feel sure that you, as well as several other very prominent men in the profession, have never had your attention called to it.

The articles that were published in several newspapers, one of which was "The Chicago Tribune," issues of February fourteenth and fifteenth, and for which the "Tribune" distinctly gives you credit, asserting that you "had provided the reporters with convenient galley proofs" of your remarks, lead us to believe that you are unaware of this point in ethics that has been so widely accepted by your professional brethren.

Now, Doctor Bevan, we appreciate all the



great things that you have accomplished in your past career. We appreciate the fact that you have been a man of high ideals and have always had the courage of your convictions, and we consider you a real man as well as a very great surgeon. You certainly have been one of the leaders of the profession for many years, and one of the wheel horses of organized medicine. For about twenty years you have been chairman of the Council on Medical Education and Hospitals. Knowing you to be a man of clear discernment, high ideals and honesty of purpose, we want to call your attention to the particular phase of this incident which seems to the downstate members of our profession to be really quite important. We greatly desire that you see this matter in what we believe to be the proper light.

#### THE MEDICAL, SOCIAL, ECONOMIC, MORAL AND RELIGIOUS ASPECTS OF BIRTH CONTROL

Brooklyn, N. Y., March 15, 1927.

To the Editor:

I have read the book "The Medical, Social, Economic, Moral and Religious Aspects of Birth Control" by S. Adolphus Knopf, M. D., and am just a mite disappointed. I expected he would ascribe the recent earthquake at Tokio to failure of the Japanese to gleefully adopt Margaret Sanger's birth-control suggestions; perhaps this edition issued too late. You see the good Doctor ascribes the increased stature and decreased death rate of the Hollandese to their wise adoption of birth control measures although the distinguished Doctor Vincent, of the Rockefeller Foundation, before my County Society of Kings, held it to be due to the fact that every Doctor in Holland is a Health Officer and every home in Holland is in sympathy with its Doctor's aim for a cleaner and a better Holland.

This Holland of Dr. Knopf's, however, has a population of 7,086,913 spread over an area of 13,205 square miles or a density of population of 563.3 per square mile, while—

The nearest approach to that population is a combination of Illinois and Rhode Island, 7,089,677 covering an area of 57,913 sq. miles with a density of 122.4 and if these people were "scrooged" into Holland's square mileage the density would be 489.6. That's the way the statistician does things; also—

These United States of ours had a population, in 1920 census, of 105,710,620 and an area of 3,743,529 square miles or a density of 35.5 people per sq. mile, and that density in 1910 was 30.9 while in 1900 it was 25.6; in 1890 it was 21.2; in 1880 it was 16.9 and in 1870 it was 13.0. Thus, you see, our increase in density has averaged about 4.5 every ten years or 22.5 in fifty years so you can figure for yourself,—it will take about 1,252 years to reach Holland's density of 563.3 per square mile and if we just attend to our knitting and go on developing as we have all those Birth-controllists will be dust and ashes and they will know, as only the dead can know, whether this arrest of tiny souls in transit from the hand of God to the bosom of Society is "good medicine."

There is a very fine article in Feb. 1927 issue of *American Medicine*, page 97, "Population, Heredity and Birth Control—A Reply" by Dr. David Whitehorn of Detroit. It answers a similarly entitled article by a Sir James Barr, C. B. E., D. L., M. D., LL.D., F. R. C. P., F. R. S. E. in the Oct. 1926 *American Medicine* and handles the germ-cell theory and the Mendelian Law and the Malthusian fears in a common sense manner and takes exception to the theory of the Birth-controllists that the world is overpopulated by a "derelict people reeking with disease, of low mentality, unable to take care of themselves and their families, and a constant burden upon society."

Books like Dr. Knopf's appeal strongly to those who are interested in advancing birth-control and if they get into the hands of near-philosophers of the types found in our high schools may do some moral damage; I mean the types whose idea of repartee is "Code? Conventions? Religion? Ideals? What are they?—Breakfast foods?"—but in the hands of those who look beyond today's publicity to tomorrow's national integrity such books as this of Dr. Knopf's are a source of great anxiety because, you see, those blase youths and maidens flowing from our high schools into society have votes, just as we have, and unless we can offset the influence of their "What is there in it for me?" by strengthening the doctrine of "What is there in it for us, as a People" those superficial sophists will win in the halls of the legislatures with their "wanted versus unwanted children;" their "voluntary parenthood;" their "40% of the Draftees

of the United States in the late war were defective;" their "Eugenical sterilization;" the self-serving advocacy of their cause by individual ministers of religion flaunting the sober judgment of a Synod of their sect; their cant phrase "Human welfare menaced by human fecundity;" their assurance that "among the intelligent birth-control is recognized as a wise social experiment" appealing to the conceit of shallow minds (with votes); their unwarranted "we are all becoming convinced" and "it is a well-known fact" and "no one can deny" all—all help to add weight to these books but not to the arguments between the covers.

Let us just fix in our minds these two facts that "In the Court of Conscience There Are No Acquittals" and that this germ-plasm theory can not survive half God-designed and half Man-corrected and it will not be difficult for us to get a sense of proportion of this so-called Mendelian law;—that when two peas of different characteristics are crossed the offspring of the first generation will be in the ratio of (a plus b) 2 or  $A^2$  plus 2-ab plus  $b^2$  . . . or that a characteristically recessive pea marrying a characteristically dominant pea would yield one Recessive, 2 Recessive-Dominant and one Dominant and that economy would dictate (or eugenics suggest) that we cast into the fire the one Recessive and the two Recessive-Dominant and proceed to breed, only, with the one Dominant pea . . . very good in its way but we must remember that a pea (like a Corporation) has no soul to save and no body to kick; that it is not concerned with a physical, social, economic, moral or religious environment and that it just IS and "thassall."

Because one's father has a wooden leg, the daughter does not necessarily have to have tooth-picks; because a child has an asymmetrical jaw does not mean degenerative characteristics in a parent,—the child might have been a "candy-kid" and through environmental neglect lost his teeth earlier on one side than the other and the permanent teeth coming in development was more progressive on one side than the other so that the scenario of hereditary frightfulness set before us by the Birth-controllists must be interpreted in the light of our common sense knowledge of what environmental influences have done for our very selves and with this bugaboo

out of the way we can look at the whole subject calmly and judicially.

By their fruits ye shall know them. This Voluntary parenthood group and the Birth Control Leagues and Uplifters, generally, stood firmly behind the Children's Bureau of the Federal Department of Labor in putting over the Sheppard-Towner Maternity Bill and behold! The Bothersome Berties and Meddlesome Matties of the Children's Bureau conducted an intensive campaign among the women of the State of Montana for a period of five years (1921 to 1926) and the virile men and fertile women of the State of Montana came through with the lowest birth rate in the United States and remember, please, that Malthus would be sorely embarrassed in applying his theory of overpopulation to Montana which has a density of 3.8 persons per square mile, as against Holland's 563.3 and England's 701.3 where Dr. Marie C. Stopes had her "wanted" baby, pictured at page 16 of Dr. Knopf's book.

Let us leave this statistical stuff for a while and get down to reason.

When we closed up the Sanger clinics in Brooklyn and sent that lady away we had to prove to the Court of Appeals of this State that we were right. It does not need a Court of Appeals to know that a Birth-control clinic limited to married women who have had some children and wish to be saved exhaustion from having one more would quit business in a hurry; the real clientele is the young wife who seeks to be a four-flusher from the moment the ring is placed upon her finger and the young girl who wants to "lead her own life" and respects but one commandment: "Thou must not be found out;" that was the picture in this city and this is why we set our faces against it.

When will we, as a People, begin to realize that all these pamphlets and all these laws of men are fruitless against the natural laws; that if we seek to master Nature we are due for a good, swift wallop; that under the natural law there must be three grades of Society, upper, middle, lower; first, second, third; intelligentsia, bourgeoisie and proletariat—call them what we will, three grades of Society till the crack of doom; that the stability of Society depends upon the maintenance of the balance of power in the middle range to avert the oppressions of aristocracy, which threw France into revolution, or to pre-



vent the horrors of mobocracy which Russia is experiencing today.

When will the people learn what the student of sociology knows—that birth-control teaching is wasted on the upper grade of society in which a pekingese pup or a Chow dog enjoys the creature comforts which properly belong to His Highness, the Baby; that birth-control teaching is wasted on the lower orders whose men will continue to use their women and whose women will continue to glory in large families and take shame if they are childless—but—in the middle range of Society, with its influx of youngsters from the lower order profiting by the generous system of education in this country, the teaching and practice of birth-control is showing its malign influence and the mathematical buffer between intelligentsia and proletariat is inconsequential and that spells the domination of the proletariat. Fanciful, think you? Extravagant? Then know you that when Lenin and Trotzky dominated Soviet Russia they designated the Proletarian Dictator of these United States when our Communistic revolution should have been completed and that his name was Eugene V. Debs.

Malthus and Mendel and Knopf to the contrary, notwithstanding, a man or a woman is not merely a father plus a mother divided by two, or a father and a mother squared in their progeny; a man or a woman is the physical, social, economic, moral and religious *Mean* between father and mother plus the developmental influence of his physical, social, economic, moral and religious environment. I know many descendants of first class Republican fathers and mothers who have become first class Democrats by attrition.

Here we have the young man and the young woman just married and, under the laws proposed by these birth controllists, in the position of requesting,—aye, demanding from a Physician instruction in the art of enjoying each other's bodies without stint and without risk and without enforceable limit to the period of freedom from care and responsibility which such information might insure; the Doctor, permitted by such a law to teach these youngsters how to four-flush, must do it or they will take their trade elsewhere and, being an opportunist, the Doctor does so instruct the Bride and Groom. What happens? Does any sane man, Doctor or layman, believe

that the "Go in peace" of the distinguished Doctor absolves that man and woman from the consequences of the Natural Law of their minds and hearts or that they can expect acquittal in the Court of Conscience upon an indictment charging violation of their spiritual inhibitions?

Just what difference is there between the gold wrought into a ring and placed upon that woman's finger and gold minted and impressed with an Eagle placed in a prostitute's hand before or after an hour of pleasure?

Just what degree of respect can exist between these joint tort feasers of the right of Society to perpetuation? Just where does that woman stand if her husband cohabits with a Lady of the Evening? Just what sort of a citizen may we expect the accidental baby of that pair to become; surely he is not the "wanted, invited, voluntary baby" which is the index of that "Radiant Motherhood" that these birth-controlists prate about. Surely the proper relation between man and woman as combined units of Society should be like the Greek letter Delta,—a Triangle, with its base on the level and its apex pointing to God; surely that base must be mutual respect, let the sides be love and passion as you will. Surely a conjugal embrace denaturalized by mechanical guards or de-chemicalized by drugs or depsychalized by a fear-complex is merely a gesture and in the Court of Conscience is only a gesture without satisfaction and accord and how the integrity of a home can survive it is a mystery, aye a miracle.

It is such thoughts we who hate Birthcontrolism should set before the growing citizenry, so that they can read the claims of high death rate among large families in the light of the law of general averages and on the basis of cumulative risks of environmental accidents where ten people are in line with a falling wall rather than one.

J. J. A. O'REILLY, M. D.

#### THE A. M. A. WASHINGTON SESSION

##### RAILROAD RATES TO WASHINGTON

The passenger association throughout the United States and Canada have authorized a rate of one and one-half fares for the benefit of members of the American Medical Association and dependent members of their families who will attend the annual session at Washington. To have the benefit of a return rate of one-half fare, it will be necessary for each member to secure a *certificate* from the railroad ticket agent when he purchases his ticket to Wash-

ington. The *certificate* must be certified by the Secretary of the American Medical Association, which may be done at the Registration Bureau to be located in the Auditorium in Washington, and must then be validated by a representative of the railroads who will be on duty from 8:30 a. m. to 5:30 p. m., May 16 to 20. When the *certificate* is so certified and validated, it will entitle its holder to purchase a return ticket to his home, over the same route traveled to Washington, at one-half fare. If the ticket agent at the member's home station does not have the *certificate*, he will furnish information as to where it may be obtained.

The *certificate* is not a receipt for money paid for a ticket, nor will a receipt entitle its holder to secure a return trip ticket at a reduced rate. Be sure to ask the ticket agent for a *certificate*.

*Certificates*, properly certified and validated, will be honored for purchasing tickets for the return journey at one-half fare up to and including May 24, but will not be honored after that date. No refund of fare will be made on account of failure to present validated *certificate* when purchasing return ticket. The return ticket must be used over the same route as that traveled going to Washington. Return tickets issued at the reduced rate will not be good on any limited train on which such reduced fare transportation is not honored.

When you purchase your ticket to Washington, secure from the railroad ticket agent a *certificate*, which, when properly certified to and validated at the Registration Bureau in the Auditorium at Washington, will entitle you to purchase a return ticket to your home, over the same route traveled to Washington, at one-half the fare paid for your ticket to Washington.

*Be sure to ask your railroad ticket agent for a certificate when purchasing your ticket to Washington.*

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NINETEEN TWENTY-SIX ANOTHER GOOD  
HEALTH YEAR, ACCORDING TO STATIS-  
TICAL BULLETIN METROPOLITAN  
LIFE INSURANCE CO.  
JANUARY, 1927

Health conditions among American and Canadian wage-earners and their dependents in 1926 were good. They were not, it is true, as favorable as in 1925, 1924, or 1921, which were years of record low mortality. The 1926 death rate, 8.8 per 1,000, was identical with that for 1922. The year 1926, nevertheless, was one of the five most favorable years from the standpoint of public health. This is indicated by the mortality experience of a large cross-section of the population—the more than 17,000,000 Industrial policyholders of the Metropolitan Life Insurance Company. These policyholders constitute more than one-seventh of the entire population and more than one-fourth of the urban population of the United States and Canada. The course of the deathrate among this group has always proved to be a reliable index of what is transpiring among the general population, the mortality statistics for which are not obtainable until

approximately a year after the figures for the insured group become available.

There were 151,343 deaths, at ages one and over, in 1926, and the corresponding deathrate of 8.8 per 1,000 was only 4.4 per cent. in excess of that for 1925, the best year in public health history. As an indication of the progress which has taken place in the sanitary history of the industrial population within a period of sixteen years, attention is called to the fact that the 1926 deathrate was 29.5 per cent. below the 1911 figure, and that, if the mortality rate of 1911 had prevailed in 1926, there would have occurred 63,330 more deaths than were actually reported among these millions of insured lives.

COMPARISON WITH MORTALITY RECORD OF THE GENERAL  
POPULATION

The latest mortality figures available for the general population of the United States relate to the year 1925. Between 1911 and 1925 the deathrate in the general population\* declined only 15 per cent., as compared with a drop of 32.5 per cent. among Metropolitan Industrial policyholders. The percentage decline among the latter was, therefore, more than twice as great as among the population at large. The decline in the mortality of the insured group between 1911 and 1925, *over and above* that for the general population resulted in a net saving of 35,690 lives in the year 1925, alone. The cumulative saving of lives among Metropolitan Industrial policyholders over the whole period, 1911-1925, *over and above* the saving expected from the decline in mortality among the general population was 240,744.

EXTENSION IN THE LIFE SPAN 1911 TO 1925

Among Metropolitan Industrial policyholders there was also a greater extension of the life span than among the general population. Comparing the expectation of life in 1925 with that prevailing in the two years 1911 and 1912 combined, we find that the life expectancy of the Industrial policyholders increased 8.88 years, while the gain in the general population was only 5.16 years. In 1925, the expectation of life, at birth, among Metropolitan Industrial policyholders was 55.51 years.

THE YEAR 1926 BEGAN BADLY

The very satisfactory health record for 1926 was made despite a bad beginning. In the very first month, reports of increased sickness from influenza began to be received. By February, the influenza situation had become a conspicuously unfavorable item in the health record. Reports of growing prevalence of the disease came from nearly all the states—particularly from the South and Southwest. The increase continued in March, and, even in April and May, it was reflected by deathrates for influenza and pneumonia which were very much in excess of those of the corresponding months of 1925. Even though the influenza that prevailed early in 1926 was not, by and large, of the

\*In the U. S. Registration States.



virulent type, and despite the fact that the 1926 outbreak was not a major one, as measured by the epidemics and pandemics of several prior years, it caused a marked rise in the deathrate for all causes combined. In March and in April, the mortality from heart disease, chronic Bright's disease, and cerebral hemorrhage was much in excess of that record in the corresponding months of 1925. This is a repetition of what has happened in other outbreaks of influenza when the deaths of thousands of persons who had chronic degenerative disorders were hastened.

An unusually severe and widespread outbreak of measles was another item in giving 1926 a bad start from the health standpoint. The mortality from whooping cough was also considerably above average.

#### IMPROVEMENT BEGAN IN MAY

With the month of May marked improvement began to be manifest, and in June the deathrate for all causes combined was lower than in the corresponding month of 1925. During the remainder of the year health conditions in general were as favorable as during the record health year, 1925.

#### SOME NEW "BEST RECORDS"

The year 1926 established "best records" for a number of diseases of major public health interest.

Typhoid fever, which had been showing a continuous decline for many years, up to 1924 (followed by a slight rise in 1925), established a new minimum in 1926, with a deathrate of 4.2 per 100,000. Scarlet fever repeated its minimum rate of 3.4, which is identical with the figure for 1925. Diphtheria established a new low point with a rate of 9.5. Diarrheal diseases declined to the minimal figure of 10.5, while diseases of pregnancy and childbirth showed a most gratifying decline to a rate of 15.6 per 100,000—well below the former minimum (16.9) established in 1925. Puerperal septicemia and puerperal albuminuria, the two most important conditions under the general heading of maternal diseases, also registered new low points. In the field of violent deaths, the rate for accidental drownings dropped to 6.3 per 100,000, the lowest ever recorded, while accidental burns registered a rate of 6.1, which is the minimum, but which was also registered in the years 1925 and 1922.

#### TUBERCULOSIS DEATHRATE STILL NEAR THE MINIMUM

For the second time in the history of the American and Canadian industrial populations, the deathrate for tuberculosis was below 100 per 100,000. There was, it is true, a slight increase in the rate to 99.2, as compared with 98.2 in 1925. The year 1926, therefore, broke the long sequence of years which have shown year-to-year drops in the tuberculosis deathrate. This is by no means a discouraging development. For several decades there has been a marked reduction in the mortality from this disease. The time was bound to come, therefore, when we would experience a decided retardation in the velocity of that decline, or a new low point would be reached which it would prove difficult to better for some years. It is just possible

that this low point was reached in 1925. When the mortality from tuberculosis, by color and sex, becomes available for 1926, we believe that it will be shown that the very slight increase recorded for the policyholders, as a whole, is due entirely to a rise in the deathrate of colored persons. This was the case, at any rate, for the first nine months of the year, at which time a very slight decline among the white policyholders had been observed, which was a little more than counterbalanced by an increase among the colored.

#### COMMON COMMUNICABLE DISEASES OF CHILDREN

The combined deathrate for measles, scarlet fever, whooping cough, and diphtheria in 1926 was 25.8 per 100,000. Although this marked an increase of 31 per cent. over the figure for 1925 (19.7) it is still the lowest rate for this class of diseases with the exception of the 1925 figure. The measles rate, in 1926, was 8.0 per 100,000, which was more than triple the figure for 1925, and there was a 40 per cent. increase in the deathrate for whooping cough, with the result that the mortality from that disease was the highest recorded since 1920. The high rates for these two infectious diseases of childhood should be interpreted in the light of the tendency of these diseases to increase and decrease in cycles of from three to five years.

The new minimum rate for diphtheria is perhaps the greatest single sanitary accomplishment of 1926. There is no good reason why the continuous drop in the diphtheria rate which we have observed since 1921 should not go on through coming years until the mortality from this dreaded scourge of childhood becomes a negligible item in our mortality record. We now know how to recognize susceptibles and how to protect them. Every year, the attack upon diphtheria is becoming more thoroughgoing. Demonstrations in a number of communities have shown, beyond a doubt, that diphtheria can be stamped out. The time has come when we can say that with the increasing administration of toxin-antitoxin to school children and to those of pre-school age, the outlook is indeed good for the virtual control of this disease.

#### A NEW MAXIMUM DEATHRATE FOR CANCER

Cancer caused 12,830 deaths in 1926 with a rate of 74.9 per 100,000. This is the highest deathrate ever recorded for this disease among Metropolitan Industrial policyholders. These 12,830 deaths from cancer constitute 8.5 per cent. of the deaths from all causes combined in 1926; or stating it in another way, one death out of every 12 was due to cancer. Cancer is the outstanding bad spot in the public health record of last year. What has happened with respect to this disease is in direct contrast to what has been accomplished in life-saving with such diseases as typhoid fever, tuberculosis, puerperal conditions, diphtheria, and diarrheal complaints. With cancer, no real progress has been made. The most recent research has demonstrated, beyond doubt, that the general tendency of the cancer deathrate is upward. In a recent study of the subject by the Metropolitan Life Insurance Company, it was shown that the annual rate of in-

crease per 100,000 persons exposed to risk in the age group 45 and over, was 4.27 per cent. between the years 1911 and 1925. The heaviest share of this increase fell on white males, with colored males next in order, and a significant increase was also observed among white females. Among colored females there was a slight upward tendency. Significantly upward trends were shown for cancer of the stomach and liver, the peritoneum, intestines and rectum, and the breast.

#### MORTALITY FROM DIABETES IS AGAIN INCREASING

The deathrate from diabetes was the highest since 1922, and, with the exception of that year, the 1926 figure for this disease (17.0 per 100,000) was the highest ever recorded among Metropolitan Industrial policyholders. With the inauguration of the insulin treatment in 1923, there was a gratifying drop in the diabetes deathrate. This continued through 1924 and we were hopeful at that time that through the increasing use of the insulin treatment, the declining tendency would persist through the subsequent years. We must now, perforce, conclude that the use of insulin has not effected any lasting favorable change in the deathrate from diabetes. It is possible, however, that but for the extensive use of insulin, the rate would have increased much more rapidly than it actually has.

#### THE DEATHRATES FOR THE PRINCIPAL "DEGENERATIVE" DISEASES ALL INCREASED IN 1926

The mortality from organic heart disease increased 5.7 per cent. in 1926, as compared with 1925, and there were smaller increases for chronic nephritis and cerebral hemorrhage. As noted on page 2, the rises in these deathrates were, in part at least, reflexes of the influenza outbreak of the early part of last year. Heart disease, as in every year since 1921, was the leading cause of death.

#### MORTALITY FROM DIARRHEAL DISEASES DECLINES

The deathrate from diarrheal diseases in 1926 (10.5 per 100,000) was the lowest ever recorded among Metropolitan Industrial policyholders, at ages one year and over. As the deathrate from these conditions is a more important item in infancy than during any other period of life, we are glad to be able to report that there was also a marked decline in this cause of death among our infant policyholders.

#### ALCOHOLISM DEATHRATE AGAIN INCREASES

Six hundred thirty-eight deaths were charged to alcoholism in 1926 as compared with 485 in 1925. The deathrate rose to 3.7 per 100,000, as compared with 3.0 in the preceding year, an increase of more than 23 per cent. The 1926 deathrate is the highest recorded for this disease for any year since 1917, when a figure of 4.9 was registered. The 1926 deathrate is more than six times as high as that for 1920, which, in turn, was the lowest ever recorded; it is two and one-half times as high as the rate for 1919 and more than twice as high as that for 1918. In the "pre-war" years, 1911 to 1916, the highest rates recorded were 5.3 and 5.2 per 100,000 in 1912 and 1913, respectively; and the lowest were 4.0 and 4.1 in 1911 and

1915 respectively. It is thus obvious that despite the persistent rise in the alcoholism deathrate since 1920, the mortality has not yet reached the figures in evidence in "pre-war" years, although the 1926 figure is more than double that for 1918 which antedated the inauguration of National Prohibition by two years. It is clear, therefore, that unless the current trend in the alcoholism deathrate is checked within the next two years, 1927 will record a figure in excess of those for two of the "pre-war" years; while 1928 will register as high a rate as has been recorded for any year since 1911, the earliest for which data are available for the industrial population.

Requests have come to the Metropolitan to analyze and publish its alcoholism deathrates for the entire period 1911-1926. It is felt that, in order to make a fair comparison for prohibition and "pre-war" years, it will first be necessary to eliminate from the picture the more than 1,000,000 policyholders who live in Canada and among whom there are relatively few deaths from alcoholism. It will be necessary, further, to add to the alcoholism total, deaths reported from wood and denatured alcohol poisoning, which have been fairly frequent since 1920, but which were of no numerical importance whatever in "pre-war" years. It is now planned to make such a study and to publish the results in a forthcoming number of the *Bulletin*.

During the five years, 1922-1926, there occurred 2,295 deaths from alcoholism among Metropolitan Industrial policyholders. Of these, 2,270 occurred among approximately sixteen million persons living in the United States and only 25 among approximately 1,000,000 Canadians.

Deaths report from acute poisoning by wood or denatured alcohol numbered 29, as compared with 24 in 1925; 20 in 1924; 27 in 1923; 36 in 1922; 71 in 1921; and 90 in 1920.

Cirrhosis of the liver, which is closely associated with alcoholism, caused 1,148 deaths in 1926, as compared with 1,116 in 1925. The deathrate, however, declined slightly: from 6.9 per 100,000 to 6.7. In both 1924 and 1923, the rate was 5.8.

#### VERY SLIGHT DECREASE IN FATAL ACCIDENTS

Accidental deaths as a group were responsible for 10,641 deaths in 1926 or for seven per cent. of the mortality from all causes combined. The deathrate was 62.1 per 100,000, a slight drop from the figure for the preceding year (63.9). There has been no appreciable change in the mortality from fatal accidents during the last four years. We had a lower accidental drowning deathrate in 1926 (6.3 per 100,000) than ever before experienced. For accidental burns the deathrate was 6.1, which was identical with that for 1925 and 1922, and is the minimum. The deathrate for railroad accidents and machinery accidents increased slightly and there was a small drop for accidental falls.

#### AUTOMOBILE FATALITIES AGAIN RECORD A NEW MAXIMUM

Unfortunately, still another rise must be reported in the deathrate for automobile accidents. The mortality from this cause has increased year by year since



1911, without interruption, among the industrial population. The only possible comfort to be derived from the 1926 figure is that the increase was very small—in fact, it was the smallest year-to-year rise we have ever experienced. The deathrate was 17.0 per 100,000, as compared with 16.8 in 1925, and the actual number of deaths recorded was 2,905 as compared with 2,728 in 1925. The deathrate from this cause has increased 39.3 per cent. in five years; 129.7 per cent. in ten years; and 639.1 per cent. since 1911. We are not able at this time to tell what percentage of these deaths occurred among children. In past years, it has been close to 40 per cent.

#### GERMAN VIEW OF THE EFFECTS OF TOBACCO

Nicotin, states Prof. Heinrich Kionka, exists in tobacco in quantity varying from 1 to 3.8 per cent., while in France, where the plants are set wide apart, the percentage may reach 6. Few people, he thinks, realize what a deadly poison this alkaloid is; one drop of the fluid preparation is fatal to a dog and nearly so to a man. Its action on the nerve centers is violent stimulation quickly followed by paralysis; function is accelerated for the time, and unstriated muscle is stimulated by the oversecretion of adrenalin. It is partly this tonic effect that makes tobacco so universally desired, and partly the assistance which it gives to digestion by making all the glands secrete more copiously. The sedative effect he attributes to carbon monoxid rather than to nicotin. This, it is stated, is present in tobacco smoke in startling quantities, and is the real cause of most of the symptoms of the nonsmoker who feels unwell when surrounded by eager devotees in a railway compartment or unventilated room. The reason why nicotin does not do more harm among smokers is, of course, that tolerance is easily acquired, and though the beginner shows signs of poisoning at once, he soon becomes immune. Nevertheless, the limits of this tolerance are easily passed, and, according to Professor Kionka, the inveterate smoker who oversteps the mark suffers far more than the beginner, for his tissues are more or less saturated and he has less resilience. The quantity of nicotin present in tobacco smoke varies considerably. The content in the leaf is said to be unexpectedly independent of the strength of the tobacco. Whereas, with Dixon's apparatus 100 g. of light cigars gave up 1,000 mg. of nicotin, compared with 480 mg. yielded by the same weight of strong cigars, two German brands of so-called nicotin-free cigars gave 420 and 320 mg. respectively. The quantity the smoker actually absorbs varies with the capacity of the cigar, cigarette, or pipe for distilling and trapping the nicotin from the burning tobacco. A long pipe is better than a short one, a dry cigar than a damp one, and the first half of any smoke does much less harm than the last. The cigarette, says Prof. Kionka, is the worst of all, for its paper covering collects the products of distillation, which are re-vaporized and absorbed as the cigarette burns down to the end. The smoker who relights a pipe or cigar,

it is stated, probably absorbs more poison than he would from ten straightforward smokes, while chewing and snuff taking are regarded as not nearly so harmful as smoking, because only a little nicotin is absorbed. There is hardly a single pathologic condition, Professor Kionka says, that tobacco cannot cause or aggravate. It sets up sclerotic and necrotic changes in the heart and large vessels, causes color blindness and scotoma, damages the hearing by causing swelling and congestion in the inner ear, and, in specially disposed subjects, will produce a toxic psychosis or any of the minor psychic and nervous troubles that go with cumulative poisoning of the sympathetic system. Like all other habit-forming drugs, he continues, it produces worse effects when it is a psychologic factor. The ordinary man smokes because he likes it, and cuts down his consumption when he has the familiar symptoms of oversmoking, but the nervous man who uses it to tone his nerves up for brain work, when he should have learned to control them otherwise, may find himself in a bad way. Provided the poisoning has not continued so long that there are organic changes, says Professor Kionka, the damage in all cases of chronic nicotinism is largely reparable by stopping all tobacco and purging the system by a course of exercise, baths, and medicine. Iodin of potash is also useful. If nicotin is harmful to adults, he concludes, it is deadly to adolescents, and most civilized countries enforce stringent laws against smoking by young people.—*Lancet*, March 13, 1926. *Atlantic Medical Journal*, December, 1926.

#### BIRDS AND BUTTERFLIES BATTLE FOR LIFE IN HIMALAYAN SNOWS

Washington, Dec. 12.—Tiny spiders, the highest-up animals on earth, living 4,000 feet above any vegetation on the Himalayan slopes, are some of the survivors of the fittest described by Major R. W. G. Hingham, naturalist to the Mt. Everest expedition, in the Annual Report of the Smithsonian Institution for 1925, just published.

The minute creatures were found on islands of broken rock surrounded by snow and ice with no sign of life around them so that for food they must eat each other, said Major Hingham.

The relentless force of nature has driven many animals to carry on their struggle for existence at these remote heights. Wild sheep and mountain hares straggle up to 17,000 feet and grasshoppers survive at 18,000 feet, near the limit of vegetable growth. Bcbs, moths and butterflies protectively colored were found up to 21,000 feet while the spiders were found at 22,000 feet.

Burrowing and hibernation are the animal's chief protection against the cold at the great altitudes, according to the naturalist. Some birds have beaks especially adapted for digging in the frozen soil and others form communities with small burrowing rodents from whose leftover seed stores they make a precarious living.

## Original Articles

### SURGICAL SIGNIFICANCE OF LABORATORY DIAGNOSIS\*

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The object of this paper is to call attention to an analysis of routine laboratory procedures that have been conducted upon a series of over 3,000 cases that have been routinely examined and carefully studied in the past few years as they have applied for treatment for a multitude of complaints. It is not the purpose of this paper to draw a comparison between laboratory diagnosis and clinical diagnosis, but rather to draw a comparison between two laboratory procedures and to employing three routine procedures. and to suggest that these always be instituted in chronic cases before surgery is resorted to. There never should be any spirit of rivalry between the clinician, the laboratory, surgeon, and the pathologist concerning diagnostic effort. However, there should be a spirit of co-operation for any one of them may be wrong, both in their knowledge of facts and in their interpretation.

The essentials in making a diagnosis are: First, a complete history.

Second, a complete physical examination.

Third, a written summary at this time by the examining physician of his impressions and of the possible diagnoses.

Fourth, the indicated laboratory procedures.

Fifth, a re-check of the findings by the examining physician and if doubt exists a consultation with clinical pathologist regarding the laboratory procedures which have been done and which possibly have not been done that might aid in making a diagnosis.

Sixth, a re-check and consultation by a physician or surgeon who will study the case history, the laboratory report, examine the patient and analyze the diagnoses that have been made.

In considering the first of these, a complete history, it is often said that the man who is thoroughly trained will have his history outline always in mind and will not need a printed form. However, I believe in routine work. Among men who are not expert amanuenses, a printed form will often bring out points which have a

decided bearing on the diagnosis that might otherwise be overlooked. For instance, ascertaining that the man is an excessive user of snuff may explain that patient's stomach trouble or his neurosis. We have found it convenient after taking the patient's family, marital, menstrual, and personal histories and have reviewed the chief complaint, its duration and its extent, to briefly enumerate and underline if negative the various organs and tissues of the body in the terms of the laymen so that these points may not be overlooked, as for instance, asking the patient if he has any trouble with his skin, hair, nails, eyes, headache, nose, throat, tonsils, teeth, lungs, night sweats, short breath, heart, indigestion, constipation, colic, hemorrhoids, female trouble, urine troubles, nervousness, sleep, varicose veins, feet, loss of strength, fatigue, appetite, etc.

In making a physical examination we have likewise found it of use to enumerate the different systems and organs and underline these if negative. It is surprising how short a time one may take in giving the patient a complete physical examination, if one does it in a routine manner and does not cease to examine at the first positive evidence of disease that he finds.

Third, the indicated laboratory procedures are now evident and I insist that they are not evident until a careful history has been taken and until a careful physical examination has been completed. With the ever-increasing accessibility of well conducted laboratories we are apt to overlook and disregard the clinical history and clinical examination and depend entirely upon the laboratory for our diagnosis. Of the laboratory procedures that are routinely indicated there will be no debate concerning the urine analysis; and the other examination which I believe is of equal importance is the Wassermann test for syphilis; and then according to the indications of the history and physical examination we will advise test meal, blood analysis, examination of sputum, x-ray examination, etc.

Because of the necessity of keeping the cost of the examination down to a minimum it is important that only the necessary laboratory procedures should be carried out. This brings us to a consideration of those procedures which have been rated expensive. I am making a plea

\*Read before Section on Surgery, Illinois State Medical Society, at Champaign, May 19, 1926.



for a more general use of the Wassermann test and for a more general use of the x-ray in making our diagnosis. The cost of Wassermann tests has to be considered. At present we have been making rather routine use of our State Laboratory where the examinations are made without cost. Whether or not this procedure is a wise step I am not prepared to state. Possibly we are fostering the gradual inroad on our profession of State medicine when we employ our State Laboratory, but when we find that 5 per cent of the people who come to us have syphilis and only one of the five of those people give a history of lues, it would seem that in taking an average of one hundred cases that the cost would be justifiable even though we had to pay \$5.00 for each test. In considering the cost of x-ray examinations I realize that I am treading on dangerous grounds when I state that in the past and at the present, x-ray examinations cost too much and I would also add that I do not believe the profession, as a whole, make use of x-ray diagnosis in anywhere near as large a percentage of cases they should be. If an x-ray examination would always yield positive evidence of disease then the patient and the profession would gladly pay a high price for these determinations. However, if a physician or surgeon is sending through the number of cases for x-ray examinations that he should he will often have a large number of cases with negative findings and he will not feel justified in having his patients continue to pay rather high prices for these services. If 25 per cent of the cases come back with positive findings of real pathology, the man who is referring the work is packing his cases very carefully. If only 10 per cent of the cases come back positive the procedure is certainly justifiable, but the cost of the examination should not be excessive.

We are all of us convinced that in the treatment of fractures a radiogram is essential both before and after reduction, but every day some one of us is seeing cases where a sprain or a fracture did not have an x-ray. The day is here when we can consider that the man who makes a diagnosis of tuberculosis of the lungs and does not have films made as a permanent record and as an aid to his other procedures, is not using ordinary skill. It has been my misfortune to recently see three such cases, one of which had an empyema, one of which had a foreign body in the bronchus and one had metastasis in the

lungs. In our chronic appendicitis case what could be simpler than a radiogram to rule out fairly positively the possible existence of a renal stone. With the perfection of technic, it seems quite possible that we can establish a reliable method of diagnosing gall bladder disease by x-ray visualization of the gall bladder.

We have found in our public hospital that the charge of 50 cents per day per bed to every patient in the hospital is sufficient to properly finance a well-equipped laboratory under the direction of a well-trained clinical pathologist with several lay assistants. This small fee entitles hospital patients to all examinations without any extra cost except basal metabolism and x-ray work which is done for 50 per cent of the usual charge.

In an analysis of 3,342 Wassermann tests done on 3,342 patients we had 191 positive tests which were confirmed by further tests on a fasting stomach and therapeutic tests. This gave an average of 5.7 per cent. Approximately one out of five of these gave a positive history of lues. We have learned that a lack of a history of repeated miscarriages does not rule out a possibility of syphilis. In an analysis of 2,800 urine examinations that we have tabulated we found 64 or 2.2 per cent had albumin, 22 or 0.7 had sugar, 9 or 0.3 per cent had bile, 4.6 per cent had pus, 1.1 per cent had blood, and 2 per cent had casts. Of the cases that had pus there have been several included where the pus was not the cause of the patient's illness, but it is significant that infections of the urinary tract are over twice as prevalent as the presence of albumin and casts and about ten times as prevalent as the presence of sugar. Furthermore, that we have three times as many cases of nephritis as we have of diabetes. It is also evident that a microscopical examination of the urine is apt to be far more important than the chemical examination. Routine Wassermanns gave positive results in 5.7 per cent of cases examined. Are insurance companies justified in requesting a microscopical examination of the urine when policy exceeds \$3,000? Our hemoglobin estimations made routinely run between 60 and 90 per cent and have not in themselves been significant except when taken in consideration with a profound anemia which was self-evident and in consideration of the color index in a differential count. Out of white blood counts that have been made, a posi-

tive evidence of leucocytosis was found in 21 per cent of the cases examined. The red count varies from 3 to 4 million, very much in the same manner that the hemoglobin estimations varied. The estimated nitrogen content of the blood was also fairly consistent with the phenolsulphonphthalein estimate of the urinary output. Concerning gastric analysis, it has been said "that if an x-ray of the stomach is worth \$10.00, then a gastric analysis is worth 30 cents," and probably this is so if one is considering a diagnosis of gastric lesions. However, we have found it a most valuable method of checking our severe anemias.

#### Conclusions:

1. Positive tests for syphilis were obtained in 5.7 per cent of cases.
2. Routine Wassermann examinations are more important and give more positive results than to routine urine examinations.
3. The microscopical examination of urine will give a greater percentage of positive findings than the chemical examination will.
4. There should be more x-ray examination and these should be less expensive. *Ford-ize x-ray work.*

#### DISCUSSION

Dr. John R. Harger, Chicago: I want to compliment the doctor on his consideration of this subject. I am heartily in favor of practically everything he said. There are two or three points that I would like to stress. The first is the expense of x-ray diagnosis. I believe he is right when he says if a man is lucky he receives 25 per cent positive findings in the cases that he sends for diagnosis. If that is true and you consider the expense of each individual case, our diagnosis is coming pretty high. It behooves us, of course, as clinicians to study these cases more carefully before sending them to the x-ray man. At the same time it seems to me it behooves the x-ray man to be a little more liberal in his charges in diagnosis because he is so many times mistaken.

I agree with what has been said before in regard to the checking of x-ray diagnosis. If the x-ray diagnosis does not coincide to a certain extent with the clinical findings, then I question the x-ray. The same thing is especially true in the diagnosis of fractures or bone lesions. So many times they will lead us astray.

The thing that the doctor suggests in regard to charging fifty cents a day for patients in the hospital to cover laboratory charges seems to me quite logical. That problem is discussed in the hospitals where I work frequently, as to how best to dispose of this question. We have in the wards now a routine charge for laboratory work of three dollars per patient. That

will cover one or two or three urinalyses and the primary blood examination but is not sufficient in a great many cases. On the other hand, it is more than is necessary in some. Just what plan is best to cover the charge of laboratory work is not a settled question by any means. It seems to me this fifty cents a day is not a half bad scheme. True enough, when you have patients in moderate circumstances and you charge them for x-ray, basal metabolism tests, blood, urine and sometimes repeated examinations, the expense is beyond the means of the patient. The lucky thing in our surgical work is that we can charge some of the patients who can afford to pay a little more and those who cannot afford it a little less and so it evens up and is a justifiable scheme.

Again I want to compliment the essayist on covering this subject. I think it is one that is very appropriate for the occasion.

Dr. Harold Swanberg, Quincy: The only phase of this paper I will speak on is in regard to the cost of x-ray examinations. Not knowing the charges asked in Chicago, I cannot speak for them, but in the downstate, we have an organization called the Central Illinois Radiological Society, which has adopted a fee schedule that applies to all x-ray laboratories outside of Chicago. You know how difficult it is to enforce fee regulations and our Society's fee bill is probably not strictly enforced. If you would investigate the cost for roentgen examinations I am sure you would find our schedule of fees is very fair. Unfortunately, x-ray is by far the most expensive in clinical medicine. I do not know why it should be, but it is. The present cost of Coolidge tubes runs from \$125.00 to \$260.00 a piece with no guarantees. Hardly a single item, exclusively used in x-ray laboratories, has come down in price since the war, in spite of the fact that there has been a great increase in the amount of work in recent years.

In the fee bill of the Central Illinois Radiological Society, \$5.00 is the charge for x-ray of the foot, ankle, wrist or hand. I think you will agree that this is a reasonable charge. No one disputes that. For a gastro-intestinal examination the charge is listed at \$25.00. This seems like a lot of money but in proportion to the \$5.00 charge for foot or hand, where only one small film is required, the charge is very reasonable. What does the average patient get in a gastro-intestinal examination? We see the patient at least four times instead of one. At least three fluoroscopic examinations are made. We make eight to ten exposures and the films are much larger and more expensive than in other examinations. You must also remember that a radiologist cannot make any of his examinations without cost, yet he does his share of the necessary charity work. When a physician makes a free examination it costs him only his time. When we do it, it costs us a great deal in materials, in addition to our time, and yet every radiologist is glad to render this service. It may be that our fees are still too high, but we are trying to cooperate with physi-



cians in every way, to encourage a more frequent use of the x-ray in diagnosis rather than to restrict it.

Dr. Edward H. Weld, Rockford (closing the discussion): I agree with Dr. Swanberg that the charges that have been made and are being made at the present time considering the amount of work that is being done are justifiable and are fair, but the point I want to bring out is illustrated in this way: We all have fracture cases that come to us that we think are all right. We know the patient has only a small amount of money and we probably take a chance, but in chest cases, we hesitate sometimes to send the patient for an x-ray of the chest because of the actual expense that the patient will be put to, knowing that from 10 to 25 per cent of the radiograms will be of no help to us. What I would like to see would be instead of sending ten cases a day to the x-ray man at the present price with a profit of \$5.00, you would send 100 a day at a profit of \$1.00.

I want to emphasize the fact that in chronic cases it is very important to get your test for syphilis, because 5 to 10 per cent of our cases show positive Wassermanns and positive evidence of syphilis.

### CHRONIC NON-ULCERATIVE COLITIS\*

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We recognize that there is considerable diversity of opinion among physicians as to the cause and frequency as well as to the treatment of chronic colitis. These differences, we believe, are largely due to our lack of accurate knowledge regarding its pathology.

The various functions of the body are so nicely adjusted that they possess a wide range of flexibility within normal limits and for this reason it is sometimes difficult to determine where health ends and disease begins.

We find it convenient to use the words "health" and "disease," but since we cannot explain the precise nature of the phenomena designated by these terms, it is difficult to give an altogether satisfactory definition of either. We know that diseases are not provoked by mysterious causes but by the ordinary cosmic agents to which the organism responds by reactions, the purpose of which is to maintain a normal state. In disease two orders of phenomena are observed, those due directly to the cause and those resulting from the reaction of the organism. With these facts in mind, Bouchard has formulated a definition of disease which is simple yet comprehensive: "It is the ensemble of the phenomena which are pro-

duced in an organism undergoing the action of a morbid cause and reacting against it."

In this connection we will briefly call attention to some of the more important functions of the alimentary tract, recognizing that so interdependent are its various parts that abnormal functioning in one is likely to modify function in other parts and, if excessive and long continued, lead to definite pathology.

Food is voluntarily introduced into the mouth and physically changed by mastication and mixture with the saliva and a portion of the carbohydrate chemically changed by action of the ptyalin. During this period two important reflexes are established which are essential to the normal functioning of the gastro-intestinal tract as a whole. We refer to the secretion of gastric juice which is stimulated by the sight of food and by its presence in the mouth,<sup>1</sup> and to the eating reflex<sup>2</sup> whereby peristaltic movements in the colon are augmented during the process of mastication and which no doubt when acting normally act favorably in assisting in a normal evacuation.

During the act of swallowing, the food passes beyond voluntary control, and it is involuntarily conveyed through the remainder of the canal to the rectum. During its passage through this intricate biochemical laboratory inanimate food substances become converted into substances which in a very short time become part of a living structure. So nicely adjusted and correlated are the different departments that when food leaves each it has undergone such physical and chemical changes as to prepare it for the next through which it is to pass, the useful material being absorbed and utilized by the various tissues of the organism and the refuse finally ejected from the body. While the quality, quantity, and character of the food eaten and the ejection of the refuse are under voluntary control, the physical and biochemical changes taking place after it is swallowed are effected involuntarily, hence it becomes apparent that it is quite possible to so regulate the food intake and the ejection of refuse that the involuntary functions of the tract may be favorably modified. On the other hand, a normally functioning tract may become pathological by carelessness in eating and evacuating the bowels.

The preparation of the food in the mouth for its reception by the esophagus, being under voluntary control, may be adequately or inade-

\*Read before the Chicago Medical Society, February 9, 1927.

quately performed, according to the habits of the individual.

The next process, that of swallowing, is a complicated one, being initiated voluntarily but consummated involuntarily; and from this point until the rectum is reached the food and waste material passes onward throughout its tortuous course uninfluenced by the will.

The chief function of the stomach is the preparation of the food material, by disinfection, chemical action and physical changes, so that the digestive process can be more promptly and efficiently completed by the enzymes with which it comes in contact in the small intestine. The presence of food in the stomach excites contractions, which begin a few minutes after its entrance, starting in the middle region of the organ and passing toward the pylorus, occurring at intervals of about three per minute. These contractions thoroughly mix the food with the gastric secretion, reducing it to a liquid mass known as chyme, which, as the pyloric sphincter relaxes, is ejected intermittently as formed from the stomach into the duodenum.

A normal meal properly prepared and masticated passes from the stomach in from three to four hours, depending somewhat on the character of the food ingested. After entering the intestine it passes along the canal in short runs by virtue of peristaltic and pendular movements, each of which moves the column forward a few inches, giving ample time for admixture with the digestive fluids and for absorption. Under normal conditions the first portion of the column reaches the cecum in from three to four hours after its discharge from the stomach, or about the time of the passing from the stomach of the last portion of the meal which should reach the cecum in four or five hours, thereby placing the whole of the refuse from the meal in the colon within eight or nine hours after ingestion.

The mucous membrane of the colon produces no digestive enzymes but secretes varying quantities of mucus in response to the presence of the material conveyed to it from the small intestine. While it possesses no inherent digestive properties, a certain amount of digestion goes on within it, especially when for any reason intestinal digestion is incomplete, under such circumstances there is probably a continuation of the digestive

process by virtue of the intestinal enzymes accompanying the material ejected into the colon from the small intestine and also by the bacteria present. It is believed by many that one of the chief etiological factors in the production of colitis is the formation of toxic substances with a resultant alkaline reaction that encourages stasis. Some of these toxic substances are given off in the feces, some absorbed and later excreted in the urine. It has long been known that indol and skatol appear in the urine, and that they are produced in the colon as a result of putrefaction of the protein molecule and are said to possess toxic properties.

Normally the contents of the small intestine reach the lower part of the ileum in from eight to nine hours after leaving the stomach, where they are retarded somewhat by the ileocecal valve which guards entrance to the cecum as well as prevents return of colonic contents into the ileum. After entering the colon the progress is considerably retarded; although its musculature has the same general arrangement as that of the small intestine it is more sluggish in its action. There is this difference, however, in the manner in which the contents of the large bowel are propelled toward the rectum. Instead of all of the movements having a forward direction, there are waves starting about the middle of the transverse colon extending in both directions, one series moving forward toward the exit and another toward the cecum: thus the fluid contents are held in the cecum until the watery portion is absorbed, and the volume is considerably reduced. Besides these movements there occurs, when the antiperistaltic waves have subsided, an occasional strong contraction of the cecum which forces a considerable portion of the contents past the middle of the transverse colon from where they are carried by the peristaltic waves to the pelvic colon and rectum.

Hertz<sup>1</sup> in 1909 made the observation that during a considerable portion of the time between meals the colon was comparatively inactive but after each meal, as observed through the fluoroscope, there was increased activity.

Cannon<sup>2</sup>, from his observation, calls attention to a probable relationship between the taking of food and defecation.

A number of other investigators have observed that the "mass movements" described by Holz-



knecht<sup>3</sup> occur three or four times daily, and that they are initiated by the taking of food.

Welch and Plant,<sup>4</sup> from their study of the muscular activity of the colon in dogs and man, find that it consists of irregularly recurring changes in tonus, usually with superimposed contractions. When the bowel was normally full feeding by mouth always increased muscular activity, but when empty feeding by mouth produced no change.

Introduction of food into the stomach through a fistula did not increase muscular activity of the colon. The results obtained from these observations indicate that there is a feeding reflex dependent upon appetite and condition of the colon as to content.

Normally the rectum is empty except just before defecation, and as soon as the material from the pelvic colon enters there is a desire for evacuation, probably brought about by a reflex initiated by a distention of the organ. Fecal material is retained in the rectum by two sets of sphincter muscles, an internal and an external, the internal consisting of involuntary muscle fibres while the external is made up of voluntary fibres and is in a large measure under voluntary control.

The mucous membrane of the entire gastrointestinal tract contains numerous epithelial cells which undergo special changes both in their morphology and function and are subject to great variation according to the stage of digestion, quantity of food present, and character of the material with which they come in contact. These epithelial cells undergo a special metamorphosis after which, by an increased production of mucus they change into goblet cells, and it seems that any of these, whether situated deeply or superficially, are capable of such transformation. It is thought that the change is effected in a mechanical way and by an accumulation of secretion. The mucous membrane of the colon is more abundantly supplied with these mucin producing cells than any other portion of the alimentary tract, and in cases where there has been long continued irritation these are found to be considerably increased in number.

That there is considerable disparity of opinion between internists as to the frequency of colitis, is well illustrated by the views of Hurst<sup>5</sup> of London, as expressed in a recent number of the *Lancet*, and those of Kantor and Sagal<sup>6</sup> as expressed

in an article in a recent number of the *American Journal of the Medical Sciences*. Hurst states that "no diagnosis is made more frequently and with less justification." On the other hand, Kantor and Sagal state that they "have long been impressed with the frequency with which simple colitis is encountered in the general run of cases, and the relative infrequency with which it is recognized by the profession at large. . . . Indeed it is almost the exception to find a normally functioning colon among 'chronic cases' of disordered digestion."

The differences of opinion expressed by these authors are probably due to the fact that they are based on different viewpoints with reference to their understanding as to what is the underlying pathology in colitis. For instance, Hurst states that "in true colitis the mucus always contains pus cells, and in the severe forms small quantities of pure pus can often be recognized in the stools, and that there can, of course, be no doubt that colitis of all kinds is almost always due to infection of the mucus membrane of the colon." Kantor and Sagal state "that the outstanding feature of colitis is the presence of mucus mixed with the stool."

Judging from the opinions expressed by these writers it seems evident that Hurst does not accept the modern definition of inflammation but holds to the old view that it cannot exist apart from an infection; consequently the number of cases of colitis observed by him is small as compared with those observed by Kantor and Sagal who seemingly base their diagnoses on the modern conception of inflammation, which includes all cases in which an excessive amount of mucus appears in the stool as a result of colonic irritability whether the result of mechanical, chemical or bacterial action.

The normal mucous membrane of the colon is richly supplied with cells whose function it is to produce mucus for the purpose of protection and lubrication and its presence in the stool is not necessarily a sign of colitis, but often the product of a normally functioning organ.

Colitis is inflammation of the colon, but the term is frequently applied when there is no evidence indicating that inflammatory changes have taken place in the organ. A diagnosis of chronic colitis may be made if there is positive evidence of the presence of mucus in the stool obtained on different days during which the patient has been

placed on a specially prescribed diet, and has not used laxatives or irritants of any sort, together with the presence of inflammatory changes in the mucosa as revealed through the sigmoidoscope. A positive diagnosis cannot always be made on these findings alone, for there are cases of chronic colitis in which chronic inflammatory changes can only be determined by a histological examination of the mucosa which is an impractical procedure. There are many instances where a diagnosis of colitis is incorrectly made on the statement of the patient that mucus had been noticed in the stool or because in a single instance it has been observed by the physician. On the other hand, many cases go undiagnosed because of lack of proper examinations. The tendency we believe is to make a diagnosis of colitis on insufficient evidence.

### *Etiology.*

There are many factors entering into the etiology of colitis and in this connection we will not attempt to enumerate all, but only a few of what we consider the more important. Any diet which tends to digestive disturbances, whether because of improper quality, quantity, preparation or selection, is one of the most important factors to be given consideration. The most common digestive disorder we meet is that of stasis, and we believe that every case of chronic constipation is accompanied by colitis or is a potential factor in its production. Drugs used over long periods for the relief of stasis are also important etiologic factors.

The colonic irrigation fad which has sprung into prominence in recent years is also a prolific source of colitis. In competent hands this procedure may be useful, but we venture to say that its indiscriminate and unscientific use at the present time is an important etiologic factor in the production of the disease and in many instances positively dangerous. Surgical operations which seriously disturb the motility of the gastrointestinal tract also favor the development of colitis. Excessive bacterial action in the colon, whether of the fermentative or putrefactive type, if long continued, encourages colitis and is a not infrequent cause. Deep x-ray therapy applied over the abdomen may produce a colitis of a very pronounced character.

In considering this subject we must not focus our attention entirely on the colon, or other por-

tions of the alimentary tract, but must also take into consideration the individual as a whole, his mental attitude being of especial importance in this connection. That the involuntary secretory and motor functions of the body are profoundly influenced by the state of mind is well known to every physician, and nowhere in the body is this more in evidence than in the gastro-intestinal tract. These facts should be borne in mind in considering the etiology, pathology and treatment of colitis.

While all forms of chronic non-ulcerative colitis are probably in general the result of some form of irritation, mechanical, chemical or bacterial, that form commonly known as muco-membranous colitis is accompanied in most instances by symptoms indicating an involvement of the autonomic nervous system, in which there is over-activity on the part of the vagus, producing spasm of the colon, which retains the mucus sufficiently long for coagulation to take place in the form of strings, sheets or casts of the bowel itself. It has been shown experimentally that stimulation of the pelvic nerves produces contraction of the colon with over-production of mucus which, as in the cases of mucomembranous colitis, contains neither albumin nor pus.

Attention has been called to the analogy between asthma and mucomembranous colitis in that they are both induced by over-activity on the part of the vagus, producing spasm of the involuntary musculature of the part involved, and accompanied by an excessive secretion of mucus free from inflammatory products, temporary relief in each being obtained when the musculature relaxes and the accumulated secretion is freed. In both of these there are paroxysms of discomfort and not infrequently pain which is relieved by the expulsion of accumulated secretion, the patient feeling quite comfortable during the intervals between paroxysms. Both may be excited by direct stimulation of the mucous membrane of the part, or by reflex stimulation, or by anaphylactic chemical stimulation of the autonomic nervous system. There is some question as to whether or not this disease is a true colitis because of the fact that in many instances there is no congestion of the mucous membrane.

In the majority of cases of chronic colitis there is marked intestinal stasis accompanied by



a contracted colon and dilated cecum, which gives opportunity for absorption of toxins which in turn may be responsible for the imbalance of the autonomic nervous system.

In general terms we may state that chronic colitis is due to the following conditions: chronic passive congestion, stasis, sequelæ of acute processes, dysentery, etc., atrophy of the mucosa, chronic mechanical and chemical irritation, digestive disturbances, various enteropathies and functional disturbances.

*Symptoms.*—In considering the symptomatology of colitis we must keep in mind that in many instances the patient is not conscious of its presence, in fact, may consider himself in good health with the possible exception of experiencing some difficulty in evacuating the bowels. In many cases he complains of stomach trouble, which in most instances is not stomach trouble but an intestinal disturbance resulting from colonic stasis. Occasionally the symptoms may be of such a nature as to suggest appendicitis, cholecystitis, peptic ulcer, or renal calculus. In a few cases the patients complain of colicky pain and the passage of strings or membranes of mucus.

The early recognition of colitis is of importance and we believe that a careful examination of the stools and sigmoidoscopic examination of the colon should be a routine procedure in the examination of every case where it is at all possible. The mere presence of mucus in the stool, even when obtained by enema, is not sufficient evidence on which to base a diagnosis. There are cases in which the secretion of mucus is temporarily excited to a considerable degree by a simple enema, and may later disappear even though the enema is continued. This is due to the fact that there is a physiological reaction on the part of the colon to the presence of the water, resulting in the secretion of mucus which soon ceases as the bowel becomes accustomed to the presence of the water. This fact should also be borne in mind in making the sigmoidoscopic examination, for the simple enema may cause a temporary appearance of congestion with an accumulation of mucus, which if subsequent local examinations are not made may lead to an incorrect diagnosis.

*Diagnosis.*—For an accurate diagnosis the patient should be given a regular diet for several days preceding the time during which the stools

are to be examined; this should be free from all irritating substances, and should contain sufficient bulk to encourage a normal peristalsis, and all laxative drugs and aperients should be withheld during this period. If under these circumstances the stools are found to be mixed with mucus and the mucous membrane is found to be congested, one is justified in making a diagnosis of colitis. On physical examination, in a considerable number of cases, tenderness over some portion of the colon can be elicited, and quite frequently a contracted distal colon may be palpated.

X-ray examination of the gastro-intestinal tract after the barium meal is of value in diagnosing the presence or absence of stasis. In order to determine to what extent stasis existed in patients who had undergone such an examination, we reviewed two thousand cases coming under observation within a period of a little over a year with the following results: the ileocecal valve was found to be incompetent in 1,316 cases or 65 per cent., spasticity of the colon in 675 cases or 33 per cent., dilated cecum in 285 cases or 14 per cent., delayed emptying time of colon beyond fifty hours was found in 976 cases or 48 per cent.

The frequency with which incompetency of the ileocecal valve was observed was probably due in part to the fact that enemas given to normal individuals are sometimes responsible for the incompetency. There are, however, cases of incompetency due to a long-continued spasticity of the distal colon which in turn is responsible for dilatation of the cecum with accompanying incompetency of the valve, the presence of which tends to delayed emptying time on the part of the colon, and to stasis in the terminal ileum, which we believe is reasonable evidence of the presence of colitis.

Proctosigmoidoscopic examination in this series showed congestion of the mucous membrane in 1,344 cases or 67.2 per cent.

*Prognosis.*—The prognosis in cases of chronic colitis should always be guarded, for complete relief from the disorder depends largely upon the extent to which organic change has taken place not only in the colon but in other parts of the alimentary tract. Where extensive changes have occurred in the mucous membrane there is probably a deep-seated infection which cannot be per-

manently and completely removed. On the other hand, there are a considerable number of cases of chronic colitis, the result of superficial infection or functional disturbances, which in the majority of instances can be completely revived.

In the treatment of chronic non-ulcerative colitis, as in the treatment of other disorders, we recognize that disease and malfunctioning are co-existent and in some instances wrong functioning is primary and disease secondary; consequently many diseases can be prevented by the prevention of malfunctioning, and can be eliminated by restoration of normal functioning. Generally speaking man treats himself badly, and this is particularly true with reference to his habits concerning the hygiene of his alimentary tract, and as a result digestive disturbances are very common. This is not so in the lower animals, for their conduct is governed largely by instinct which in man is becoming more and more an unsound guide: therefore the necessity of substituting an intelligent conscious control is apparent, and in no instance is this more necessary than in the problem of the selection of our food, and manner of living.

*Treatment.*—The treatment of chronic colitis must necessarily begin with a proper diagnosis, and this includes careful and complete examination of the alimentary tract, and where pathology is found, rational measures must be instituted for its relief, for, as previously mentioned, abnormal function in one portion is frequently responsible for wrong functioning in other portions; for instance, the presence of an achylia encourages intestinal putrefaction which in turn encourages colitis. The presence of painful hemorrhoids or cryptitis may also be contributing factors.

We believe that the problem both as to the prevention and relief of colitis is largely a dietetic one. Diet alone, however, is not sufficient for either purpose. The individual must live naturally, which means that his general habits, including his mental attitude, his work, rest, recreation, exercise and sleep, as well as his dietetic habits, must be such as to be consistent with a normally functioning organism. The diet should contain the proper proportion of food elements—proteins, fats, carbohydrates, salts and vitamins—and should be selected from such food materials as will be easily digested, and fur-

nish sufficient bulk to encourage a normal peristalsis, which will insure evacuation of the colon within normal time limits. Food should also be selected with reference to ease with which it can be, in the process of preparation, as completely sterilized as possible. Incomplete sterilization encourages fermentation and putrefaction, the products of which when excessive encourage either diarrhea or stasis, both of which tend to colitis. Foods should be prepared in an appetizing manner but free from substances which act as irritants.

To be more specific with reference to the dietetic treatment of chronic non-ulcerative colitis, we recommend the selection of a liberal quantity of fresh and cooked fruits from such as are known to possess laxative properties such as pears, apples, oranges, prunes, figs, etc., and such vegetables, bread and cereals as will furnish sufficient bulk to encourage peristalsis, a moderate amount of butter, liquid in the form of acidophilus milk, and a minimum amount of sugar. There is such a wide range of selection among the fruits, cereals and vegetables that sufficient variety can be obtained so that the diet will not become monotonous.

In the majority of cases of non-ulcerative colitis such vegetables and legumes as cabbage, lettuce, asparagus, spinach, carrots, peas, corn, etc., because of their bulk will be found useful in encouraging peristalsis. There are some cases, however, in which a more bland type of diet gives better results; in such instances purees made from these are found useful, and where additional bulk is necessary it can be obtained from the use of agar or psyllium seed.

I have purposely left out reference to meat because it is very difficult of sterilization either by the ordinary methods of cooking or by the gastric juice, and consequently it inoculates the intestinal contents with a type of bacteria which by its activity in the colon produces an alkaline reaction which in turn encourages stasis; and because the principal bacteria found in meat are of the putrefactive type and when used putrefaction is encouraged with the result that toxins are formed which in many instances are detrimental to the health of the individual.

The foods previously indicated as suitable for use in cases of colitis are those which facilitate the maintenance of the aciduric type of intestinal



flora, which is of especial importance both in the prevention and relief of colitis. Another point of equal importance is the selection of such foods as will encourage evacuation of the bowel within normal time limits, and for this purpose there must be a sufficient residue to stimulate peristalsis.

Peristalsis may be increased in two ways, by irritation and by stimulation. By irritation in this connection we refer to increased peristalsis produced by laxatives, purgatives, aperients and irritating condiments, all of which tend to abnormal functioning, especially on the part of the mucous glands. On the other hand, by stimulation we refer to the peristalsis produced by those food substances which, during their passage through the canal, excite a normal physiological reaction on the part of its secretory and motor functions. From this standpoint irritating substances are to be avoided and the use of stimulating ones encouraged. In chronic non-ulcerative colitis the bowel is not in a state of irritation, as in cases of ulcerative colitis, but in a state of tone or hypertone or in a state of atony caused by an imbalance of the autonomic nervous system, either from peripheral or central irritation or both, a condition which mechanical stimulation from the residue of natural food products does not aggravate but relieves by removing from the bowel the products of putrefaction.

The statement of Hurst<sup>7</sup> that "the sins of the colon are its diseases, but I sometimes wonder whether it is not more sinned against than sinning, for what with attacks from above with purges, attacks from below with douches and frontal attacks by the surgeon, its sorrows are numerous and real," is quite to the point and the successful treatment of colitis includes the elimination of frequent use of all purgatives, laxatives and douches that are of an irritating nature. In cases where the best laxative dietary obtainable does not relieve the existing stasis, the use of paraffin oil, agar, psyllium or bran will often be found useful.

In cases where there is an excessive amount of intestinal putrefaction, a liberal use of lactose, together with acidophilus milk, will greatly assist in establishing an acid reaction in the colon which encourages peristalsis, at the same time limiting the putrefaction of proteins. Similar

results may also be obtained by adopting a liberal fruit dietary for five or six days, followed by a dietary consisting of graham bread, butter, vegetables, fruit and milk, with a minimum amount of protein.

Many of these cases will be greatly benefited by direct exposure to sunlight or the ultra-violet rays from the quartz or carbon arc lamps, provided such exposure is intelligently prescribed and directed. Any form of physical therapy which will assist in improving the general vital resistance of these cases will materially aid in the relief of the local pathology in the colon.

In cases where satisfactory evacuation of the bowels cannot be obtained by the use of a laxative regimen as previously described, local treatments to the colon are often found useful. These, however, should be given with great care with the primary thought in mind that irritation of the mucous membrane must be avoided.

In the majority of cases of non-ulcerative colitis, the distal colon will be found to be contracted and in a state of hypertone; in such cases the daily application of heat by means of the high frequency current will be found useful in helping overcome the difficulty. This can be applied in two ways, either by the introduction of the vacuum electrode into the rectum, or by the diathermy method where one electrode is placed on the abdomen over the part of the colon involved, and the other on the back opposite. Before the high frequency current is used, the bowel should be emptied by means of the simple enema. This is administered with the patient in a comfortable position from a fountain syringe with a smooth enema tube introduced about two inches into the rectum. With a pressure head of from 12 to 18 inches, introduce into the bowel from twenty to forty ounces of a normal saline solution at a temperature of 100 to 102° F., retain for three to five minutes and evacuate, repeat the process several times until the colon is thoroughly emptied. Then introduce the electrode giving sufficient current to create a degree of heat which can be tolerated by the patient without discomfort.

In cases where the enema produces pain an application of heat in the form of a hot water bag or fomentation to the abdomen will give relief and the enema can be completed without dis-

comfort to the patient. We not infrequently encounter cases in which there is marked spasticity of the distal colon with marked dilation of the cecum and an incompetent valve; usually such cases are distinctively toxic. In such we find that in addition to the laxative dietary previously referred to, the use of the hot enema given at night before retiring is very useful in that it removes from the cecum the putrefying mass which has accumulated there. This enema is administered as the one previously described except that the temperature of the water should be 105° to 110° F. Such a treatment thoroughly evacuates the colon and favorably modifies the symptoms of toxicity of which the patient complains. If difficulty is experienced in evacuating the colon by this procedure the addition of the juice of a lemon to the water will insure favorable results. We also encounter a few cases in which the colon is relaxed, being in a state of atony. Such are benefited by the employment of the sinusoidal current applied by introducing an electrode into the rectum with a larger pad electrode over the abdomen. In these cases the current may not stimulate peristalsis directly but indirectly by causing contraction of the abdominal muscles which assists materially in evacuating the colon; this, together with abdominal massage and such exercises as will increase general muscular tone, is of assistance in overcoming the atonic type of colon. Persons with non-ulcerative colitis accompanied by stasis should be encouraged to establish regular habits with reference to the evacuation of their bowels. Many have a desire to evacuate shortly after eating. This is probably due to the fact that the eating reflex is active, resulting in mass movements in the colon which give rise to a desire to defecate. Thorough mastication of food material no doubt stimulates this reflex, which should be cultivated.

Food is the natural stimulant of the motor and secretory functions of the intestinal tract, and when other substances such as oil, bran, psyllium seeds, agar, etc., are used as aids, care should be taken to see that they are discontinued as soon as normal condition can be secured without their use.

There are many other points that might be profitably considered in connection with the treatment of this subject, but I feel that I have already consumed more time than I should; and

I thank you for your kind and considerate attention.

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#### NON-TUBERCULOUS LUNG DISEASES SIMULATING PULMONARY TUBERCULOSIS.\*

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The subject of this paper is the presentation of some of the pulmonary conditions closely resembling pulmonary tuberculosis, and at times admitted to the sanitarium with that diagnosis. I will limit myself to the discussion of the more frequent conditions encountered, namely lung abscess, malignancy, silicosis and the more rare condition, syphilis of the lung.

*Lung Abscess.* A more common disease than formerly thought to exist. Richardson in 1912 called our attention to the frequency of lung abscess following tonsil operations under general anesthesia. Since that time numerous other clinicians have reported the incidence of this disease following operations upon the upper respiratory tract. Moore found that lung abscess occurs once in 2,500 to 3,000, tonsillectomies. Singer and Graham cite 34 cases of lung abscess with 24 per cent. as a result of tonsillectomies under general anesthesia. W. B. Lennon, of the Mayo Clinic, reports 81 cases of lung abscess, pneumonia ranging first as the causative factor with 31 cases, influenza with 19 cases and operations on the upper respiratory tract third with 12 cases. In 208 cases of lung abscess in the literature reported following tonsillectomies only 7 were found in patients operated on under local anesthesia. In 2,634 tonsillectomies performed during the last five years on children at this sanitarium, I have observed one case of lung abscess in a child nine years of age. Fortunately this youngster recovered by sudden evacuation of the

\*Read before the Irving Park Branch of the Chicago Medical Society.



abscess through a bronchus. Frankel, analyzing 1,200 cases of lobar pneumonia, found that 2 per cent. developed lung abscess. Lockwood reported 10 cases of lung abscess following influenza, and Hedbloom, reporting 100 cases of prolonged influenzal infection, noted 3 cases of lung abscess.

In 22 cases of lung abscess collected within the last few years at this sanitarium, the causative factor is found as follows:

- 32 per cent. following tonsillectomy.
- 23 per cent. following pulmonary infection.
- 9 per cent. following appendectomy.
- 4 per cent. following measles.
- 32 per cent. unknown.

Lung abscess seems to involve the lower lobes most frequently, the average per cent. as given by Moore being 60 per cent. showing lower lobe involvement, 41 per cent. of these being on the right side and 19 per cent. on the left. In our series of cases, upper lobe involvement was 27 per cent., lower lobe right 35 per cent., lower left 17.5 per cent., more than one lobe right side 13 per cent., more than one lobe left 8 per cent.

In making a diagnosis of lung abscess, we must differentiate, first from pulmonary tuberculosis; second, malignancy of the lung; third, empyema; fourth, bronchiectasis. However, the symptoms of lung abscess are quite characteristic—loss of appetite, restlessness, general weakness, irregular temperature, clubbing of fingers and foul sputum are found as a general rule. The temperature is not always high and may be normal in the chronic case. Exacerbations from time to time occur, that is, the temperature will take a sudden rise and the patient will become very sick for a few days. The expectoration becomes quite marked during this time. The sputum in all cases, except the encapsulated type, is very profuse, from four to eight cups a day being expectorated. The odor is very foul and in one case here we found it necessary to isolate the patient on that account. One case of a child nine years of age recently admitted had a very foul sputum and had to be kept by herself. The temperature was very irregular and the pulse was very rapid, running from 120 to 140. On the other hand, a girl 17 years of age, who has had a chronic abscess of the lung of ten years duration, is very well nourished and is able to do some work daily.

Physically the most constant findings are dullness on percussion over the abscessed area and

diminished breath sounds. According to Norris and Landis, only eight out of a series of 63 of their cases gave definite physical findings. Our percentage runs much higher. As an aid in diagnosis, the x-ray is a most helpful one in showing a definite density. At times malignancy may be confusing. We have one case here who at first was considered a lung abscess case on the x-ray report. However, following a good history this diagnosis was readily excluded. Carman has pointed out that pulmonary malignancy is nearly always possible to diagnose from the plates, but in certain cases the patient's history and the physical findings must be considered. Needling of the abscess and the bronchoscope have been mentioned as an aid in diagnosis. But this procedure is dangerous and should not be resorted to. Pleural syncope or empyema may result from needling and infection of the healthy lung may result following bronchoscopy.

With a good history, x-ray and careful physical examination, the diagnosis of lung abscess is readily made. One thing we must remember—make your diagnosis early, as your only hope of getting good results in the treatment depends on an early diagnosis. When we find that a patient, following a pneumonia, or a tonsillectomy, or any other surgical interference performed under general anesthesia, develops a slight cough, temperature with pains in the chest, keep in mind the possibility of a lung abscess.

If we remember that we are dealing here with a disease process that has a tendency to chronicity and gradual extension, we can readily see that the treatment of lung abscess is one that calls for good judgment in making up our minds what we can do in a certain particular case. I might say here that the type of abscess, location, extent of adhesions will all have to be considered in outlining the treatment. There is no doubt that there are a number of cases that cure themselves by suddenly emptying out, and the process goes on to recovery.

Barlow has given us a good outline for treatment of lung abscess:

1. In foreign body abscess, bronchoscopic treatment is indicated.
2. Post influenzal diseases, bronchoscopic treatment is indicated.
3. Aspiration abscess, indications for a complete pneumothorax at a very early date is indi-

cated. Later pneumothorax is impossible on account of adhesions.

We have tried in our cases pneumothorax treatment, rib resection with exploration of the abscess and posture. Of the three methods tried in our cases, I believe that pneumothorax holds out the best hope and is a method easily employed and successful in a good many cases.

Pneumothorax treatment is not new in the treatment of lung abscess. Forlanini used it in a putrid abscess. Tewksberry reported ten cases with good results. Harrel, Goldberg and Biesenthal and many others cited cases treated with pneumothorax with excellent results. The idea of the pneumothorax is to squeeze the abscess contents of the lung out, put the lung at rest and allow the closing up of the cavity. We generally give small amounts of gas frequently repeated. We have treated here six cases of lung abscess with pneumothorax; two of these recovered, one is on the road to recovery, two very much improved and one case unable to do pneumothorax due to extensive adhesions. This last case is the case of a little girl who had a tonsillectomy done about eight months prior to her admission. On the eighth day she developed a cough, temperature, pain in her chest, foul expectoration. Although seen by a number of physicians, nothing very definite was attempted. Here was an ideal case that should have recovered rather promptly under pneumothorax treatment, but was allowed to go until adhesions became so marked that it was impossible to get into the pleural cavity. We resected two of her ribs and inserted a good drain. She picked up considerably but she still has the abscess and the outlook is rather doubtful.

Out of the five rib resections, two are considered as much improved, one died and one discharged, condition stationary. We generally note that following a rib resection an opening is left that keeps on draining, with diminution in the amount of sputum expectorated and improvement in the general physical condition.

*Malignancy of the Lung.* Intrathoracic neoplasms are at times mistaken for tuberculosis of the lungs due to the insidious onset with cough and mild fever, the type of fever often simulating the tuberculous temperature. Together with this we have hemoptysis and loss of weight, naturally making one strongly suspect the more common

tuberculous disease. The differentiation is not often very easy, although we should remember that, with the gradual increase in the size of the tumor, we get pressure symptoms that are not found in tuberculosis, and, on account of the pressure of the inferior vena cava, enlarged veins of the chest wall or shoulder or anterior part of the neck are produced. There may be a difference in the rate of the pulse when the two radials are compared. With the growth of the tumor mass, the local signs may be made out readily by physical examination. Percussion over the site of the tumor elicits a flat note. Feeble or total absence of the breath sounds over the circumscribed area is found. A very dull, flat note with feeble breath sounds without any rales is strongly suggestive of a tumor. A careful watch for metastasis may clear out an obscure case. When blood is found at the first puncture, it is of great significance.

H. Gideon Wells gives a total of 25 cases of carcinoma of the respiratory tract compared with 317 of the alimentary canal observed at the County Hospital, showing the relative infrequency of carcinoma of the lung. Funk, of the Jefferson Medical Hospital Clinic, cites 1200 cases sent into the wards of the chest department with a diagnosis of advanced tuberculosis. Seventy-two or 6 per cent were incorrectly diagnosed and of this number five were instances of malignancy of the lung. In other words, one patient out of every 250 referred with a diagnosis of advanced pulmonary tuberculosis showed malignant disease instead. He cites Ash who collected autopsy statistics from a number of tuberculosis institutions and found among 551 autopsies 61 were non-tuberculous, or 11 per cent. Among these are 7 instances of neoplasm. Statistics of Passler show that among 1,000 cases of malignant disease there were 16 cases of primary carcinoma and five of primary sarcoma of the lung. Seydell in 10,829 autopsies found 184 tumors of the lung and pleura. Of these 16.8 per cent. were primary and 83.2 per cent. were secondary. Sailer and Torrey gathered statistics showing 130 primary carcinomas of the lung in 87,451 autopsies. Secondary carcinoma may arise from the initial focus in the abdomen or from extension from the esophagus or thyroid.

The frequency of both tuberculosis and malignancy existing in the same case was found



by Schwalbe, who was able to demonstrate the co-existence of tuberculosis and malignancy in all three of the ten cases which he autopsied.

Norris and Landis state that among 662 autopsies at the Phillips' Institute there has been no instance in which tuberculosis and malignancy occurred together.

When the two diseases are associated, that is, pulmonary tuberculosis and malignancy, the problem of diagnosis is a difficult one. The symptoms as noted by Funk were shortness of breath, cough, pain on the affected side, pressure effects such as clubbing of fingers, change in the voice due to involvement of the recurrent laryngeal nerve, prominence of the veins of the neck, cyanosis of the face, edema of the arm and differences in the radial pulse.

I have observed three cases of carcinoma of the lung here one of which went to post mortem. This man was 43 years of age, admitted to the sanitarium with a diagnosis of incipient tuberculosis. Onset in December, 1921, when he was taken with a cough, which did not respond to treatment; languor, lessening of endurance and loss of weight was noted. There was little expectoration. Complained of occasional night sweats. On admission in September, 1922, he presented pale skin, long curved nails, double systolic murmur mitral in character; showed a dullness on the right side with moist rales, complaining of severe pain on that side. The x-ray showed a heavy density over the fifth rib to the base in the right chest. The possibility of a lung abscess was considered. An exploratory puncture showed a bloody exudate. The laboratory report stated they could find no cancer cells, only red corpuscles. Urine was negative. Wassermann negative. Sputum remained negative until his death. Post mortem revealed a large carcinoma involving the right lung. In this case, the early diagnosis of tuberculosis was considered, also lung abscess and malignancy. In this case it is shown that the presence of hemorrhagic fluid is often indicative of malignancy.

*Syphilis of the Lung* is a rare condition and when it does occur it is very difficult to diagnose pathologically as well as clinically. Osler found only 12 cases in 2,800 post mortems at the John Hopkins Hospital and in eight of these the lesions were of congenital syphilis. There was no evidence of syphilis elsewhere and

the Wassermann reaction was negative. Among 6,000 cases of syphilis at Copenhagen, syphilis of the lung was observed only in two cases. Peterson among 88 autopsies of patients that acquired syphilis found lung lesions only in eleven.

Now and then we find cases simulating tuberculosis and treated as such. Symptoms are very much alike. Cough, expectoration, slight fever, loss of weight and at times even hemoptysis. In all cases the disease is rather slow; physical examination shows the lesion is located in the middle or lower lobe and the apex is practically free from many changes, which is not true of pulmonary tuberculosis. The Wassermann reaction may help but not very much as the tuberculous cases may have a luetic infection. When the tubercle bacillus is implanted in the syphilitic subject, the course of tuberculosis is rather favorably influenced, probably as a result of the tendency of production of connective tissue.

Among 9,942 cases discharged from the sanitarium during the period 1918 to 1923 inclusive, we found 293 cases of pulmonary tuberculosis with a positive Wassermann, or a percentage of 2.9. We have observed two cases considered as syphilis of the lung. One case came to autopsy, a man 48 years of age with a history of chancre in 1914. Developed pleurisy in 1917 and was at St. Mary's Hospital under treatment at that time. Onset in August, 1919, with edema of the face, dyspnea, loss of weight, tired and weak. In October, 1919, right side of chest was aspirated and three pints of fluid removed. He was admitted on account of pleurisy with effusion. No cough or expectoration. Slight edema on the right side of face. No chills. Temperature normal. Well nourished. Entire right side of chest is dull except the apex which has a resonant sound. Diagnosis of pleurisy with effusion was made on a tuberculous basis. Sputum, however, was always negative for T. B. Wassermann report on blood was four plus. X-ray showed a density of the entire right side of chest. Post mortem performed here confirmed diagnosis of syphilis of the lung.

*Pneumoconiosis.* The condition rarely, if ever, figures in morbidity or mortality returns as it is nearly always disguised under some other form as chronic bronchitis, pleurisy, tuberculous asthma, etc. The diagnosis of tuberculosis is

often made instead of pure pneumoconiosis as the symptoms and physical signs are practically identical. Repeated sputum examinations will differentiate. The power to do damage to the lung tissue ranges from pure silica, the most dangerous of all forms of dust, to the relatively innocuous cement dust. Coal dust, on the other hand, takes from 20 to 30 years to produce changes sufficient to cause symptoms. The presence of marked fibrosis in those cases would seem to argue in favor of rendering the lungs less susceptible to T. B. rather than increasing the susceptibility. This is especially true of pot-  
 ters as tuberculosis occurs rarely amongst them. The Department of Interior Bureau of Mines Bulletin of 1921, by Harrington and Lanza, discussing miners' consumption in miners of Butte, Mont., (hard coal) state that dust is dangerous in proportion to the amount of the free silica or other sharp and insoluble material it contains. Miners' consumption is neither contagious nor infectious, develops slowly, and by formation of scar tissue gradually impairs the function of the lungs. All statistics emphasize the fact that the proportion of mortality from pulmonary tuberculosis among marble cutters and polishers is exceedingly high.

A case of pneumoconiosis recently came to post mortem at this sanitarium. He was a man 35 years of age, occupation flour miller. For the last eight and a half years he was employed at the mill sharpening tools. He did this for nine hours daily. He had to quit work in December, 1920, on account of a cold. Past history is negative except tonsillectomy in 1916. Had a tired feeling with a gradual loss of weight, cough, poor appetite and marked dyspnea. Physically he showed emaciation, pallor, limited excursion of chest, dull resonance throughout chest with no rales. Urine negative. Wassermann negative. X-ray report shows that the entire chest is honey combed. Sputum was always negative for T. B. This man was sent to the sanitarium with a diagnosis of far advanced pulmonary tuberculosis. The diagnosis of pneumoconiosis or silicosis was made ante mortem and substantiated at post mortem examination.

In analyzing these cases I have merely tried to point out that cases showing findings in the chest, together with loss of weight, temperature and hemorrhage do not always mean tubercu-

losis. The average number of cases of lung abscess, malignancy, syphilis of the lung and pneumoconiosis while not large are conditions which should always be considered. I have not discussed in this paper the more common disease, asthma, which is often found in the cases admitted to the sanitarium.

## PREMATURE INFANTS: A REPORT OF 266 CONSECUTIVE CASES\*

REPORT FROM THE PREMATURE INFANT STATION  
AT MICHAEL REESE HOSPITAL IN THE  
SARAH MORRIS HOSPITAL FOR CHILDREN.

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I. M. CHAMBERLAIN, M.D.

CHICAGO

While most of the general hospitals having obstetrical departments are more or less prepared to care for the infants born within the hospitals, only a few which have well organized children's departments are equipped to receive and care for infants prematurely born outside the institution. No hospital is willing to take infants into its obstetrical nursery from the outside because of the danger of carrying infection.

The special station for premature infants at the Sarah Morris Hospital is the first clinic of its size to be established in Chicago to receive well and sick premature infants from any and all sources. The station has the capacity for the care of 20 infants. There are three rooms, one of which is devoted to normal infants and one to infected cases and the third for infants being prepared for removal to their homes.

About seventy-five per cent of the cases cared for in the Sarah Morris Hospital have received free service at the request of physicians or midwives or nursing organizations who have referred the cases to the hospital. Approximately sixty per cent of the cases received come from homes, the remainder were referred from our own or other hospitals. This work has been made possible through endowment by the Infants' Aid Society of Chicago. The income from this Society is so allotted that it can be used only to pay the salary of nurses and wet nurses.

In-so-far as practical, the hospital sends its small electrically heated hand ambulance with an

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interne and nurse to bring the infant to the station. By so doing, refrigeration, which is one of the chief causes of high mortality, is to a large extent avoided.

It has been the object of the station to give a practical demonstration to other institutions in the care of this type of infant. The equipment is very simple consisting of individual electrically heated water-jacketed beds, heated dressing tables, hygrometers, high and low temperature reading thermometers, Quartz lamp and time clock.

Human milk is the diet used for all infants during the first days or weeks in the department as their needs may indicate. Every individual feeding is registered on the infant's daily chart by a special time clock. Punching the clock necessitates the nurses being on the job and is the best assurance that the infant has had needed attention.

The station is under the care of a graduate nurse who has under her direction the needed number of women trained for this special work together with some nurses in training who may elect this special service. The number of undergraduates who registered for this course vouch for its popularity.

In each instance the mother is encouraged through the efforts of the social service department to keep up her breast milk supply.

In preparation for return to their homes the social service department visits the home to which the babies are to go at regular intervals for the purpose of instructing the mother in the preparation of feedings and the required hygienic care of the infants.

A special clinic for graduated babies is conducted at the hospital for such infants as are likely to be neglected in their homes unless properly supervised. We believe this later follow-up is to be ranked as of equal importance with the hospital care of the infant if good physical development is to be attained.

The station has had a steady growth since it was opened in 1922. During its first year 19 cases were received: in 1923, 28; 1924, 47; 1925, 66, and in 1926, 106. In our series of 266 cases, 138 or 51.9 per cent. were discharged from the hospital, in most instances directly to their homes. Excluding the 54 cases that died in

the first 24 hours, 66.9 per cent. survived. Immaturity, refrigeration and neglect were the common causes of death in those dying in the first 24 hours.

Autopsies were performed on 79 cases. Bronchopneumonia with and without atelectasis was present in a large number of the fatal cases. Intracranial hemorrhage was found in 31 of the 69 cases in which the skull was opened. Several other cases showed positive evidence of intracranial hemorrhage which however was not proven by autopsy.

In any infant having severe cyanotic attacks, congenital heart, atelectasis, pneumonia, abdominal distention, being eliminated—the most probable cause is cerebral hemorrhage. We have had no cerebral hemorrhage cases without a history of cyanosis at some time or other.

During the past year Wassermann reactions have been made on at least one parent of every case admitted. We have taken this precaution because of the low percentage of syphilis diagnosed in previous years, about 3 per cent. During 1926 they did not average more than 10 per cent of all babies surviving more than 24 hours.

Multiple pregnancy was the most common single cause of premature labor. Many showed evidence of impaired vitality. Forty-nine of the first one hundred and sixty infants reported were the product of multiple conception. Two of these were from a triple pregnancy.

Each infant must be considered individually, as it is impossible to formulate definite rules for feeding, at least during the first ten days.

1. We must have a definite idea of the minimum food requirements for life.

2. The amount of food necessary to maintain at least a stationary weight.

3. The amount of food needed to meet the requirements for growth and development.

Approximately one-seventh of the body weight of fluids and human milk of a food value of 70 calories per kilo every twenty-four hours is required to maintain life. Little can be expected in the way of weight increase until 90 calories are reached, and depending on their weight, body surface and physiological development, their later needs will approximate 100 to 140 calories per kilo body weight. In exceptional cases it may

be necessary to feed breast milk in amounts equaling 160 to 200 calories per kilo. Such infants are usually markedly underweight for their fetal age.

Infants, to fulfill all their needs, will therefore require from 140 to 200 cc. of breast milk per kilo, or about one-seventh to one-fifth of their body weight daily. They can, however, maintain life on 100 cc. and hold their weight in most cases on 130 cc. per kilo. Exceptionally, we have fed as high as 300 cc. per kilo in underweight infants. The latter must be carefully observed for signs of overfeeding, such as vomiting, gastric dilatation and cyanosis.

Beginning (in most cases by the second day) with 20 to 40 cc. human milk per kilo of body weight, the quantity may be increased by 8 to 15 cc. daily per kilo until, usually by the tenth day, feedings averaging from 80 to 140 cc. per kilo can be fed.

The size of individual feedings will vary with the method of feeding. When catheter fed, six to eight feedings a day are given with an average of from 4 to 6 cc. per feeding during the second day. The feedings are increased daily by an average of 2 cc. per feeding. When feeding from the bottle or by dropper, smaller feedings are usually given more frequently—usually from eight to ten daily, although twelve may be needed when larger feedings are not retained. Begin with 2 to 4 cc. and increase by 1 or 2 cc. per feeding on each succeeding day, until 140 to 200 cc. per kilo per day is reached.

The food and water to be administered should be noted in writing for the nurse's instruction each day, after a thorough inspection of the infant and its clinical chart.

The diet of a premature infant making a satisfactory gain in weight should not be changed arbitrarily without a well-defined indication.

*Other Dietetic Requirements.* To counteract the effects of boiling, orange-juice feeding should be instituted by the third week, beginning with 0.5 cc. (8 drops) and increasing 2 to 4 cc. ( $\frac{1}{2}$  to 1 dr.) daily by the eighth week in order to avoid scurvy. Cod-liver oil as an antirachitic should be fed by the fourth week, beginning with 0.5 cc. (8 drops) daily divided into two feedings and increased to 2 cc. (30 drops) daily by the eighth

week. It may be mixed with the orange juice. To counteract the low iron content of these diets, carbonate of iron in 0.03 gm. (gr.  $\frac{1}{2}$ ) or citrate of iron and ammonia in 0.03 gm. (gr.  $\frac{1}{2}$ ) once daily should be started by the fourth week. The latter may be prescribed in solution. More recently we have added yolk of raw egg to the breast milk to meet the iron requirement of the infants one cc. at the start.

The majority of infants are artificially fed, when leaving the station, although in all cases unless directly contra-indicated, the mother has been encouraged through expression to keep her breasts secreting. The infants are fed at the breast on leaving the station, when the mother has been able to keep her supply. Complementary feedings may be necessary, Chymogen milk mixtures are used, usually these are started before the infant leaves the station. Usually in the artificially fed, we have continued the Chymogen feedings throughout the first year. Cultured lactic milk mixtures are our second choice. Some of the larger infants are changed to simple milk, water and sugar mixture before this time.

While many of the infants show minor, and a few, moderate degrees of rickets, only a very small number of our cases have developed marked manifestations. We believe this to be due to the fact that cod liver oil and egg yolk and Quartz light therapy was introduced when the infants were two or three weeks of age. We have had no cases of rickets requiring mechanical appliances or surgical intervention to correct deformities.

Megacephalus while occasionally seen, disappears early, due, we think, to the early addition of cod liver oil to the diet together with daily exposure to the ultra-violet ray. Active signs of tetany did not develop in any of the infants of our series.

Teething has been delayed, as would be expected; however, thirteen of our infants had one or more teeth during the seventh month. As a group, by the eighteenth to twenty-fourth month they represent closely in physical and mental development full term infants. There are no apparent mental defectives in our series. Nature has wisely removed those not fitted to survive. Only two show any marked degree of hydrocephalus and one shows active evidence of intracranial hemorrhage.



## INDICATIONS FOR THYROIDECTOMY\*

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Any operation, if it is to be successful, must be performed with correct indications. This is just as important for the ultimate result as a good technique. Indications for thyroidectomy may be readily classified into three groups, namely, cosmetic, mechanic and functional.

The *cosmetic* indication is the one that is the most difficult to define, and brings up the question of prevention. In endemic goiter districts, where from 30 to 60% of all school children have an enlargement of the thyroid, no one would think of advising surgery for all these cases. Marine and Kimball in this country and Klinger in Switzerland have shown how much the preventive and therapeutic administration of minimal doses of iodine can accomplish. The thyroid gland enlarges at birth, before puberty and in pregnancy, in a physiologic manner. In endemic goiter districts, such as around the Great Lakes, the physiological enlargement is exaggerated. The rational time to administer iodine, then, is between the ages of ten and fifteen years and during pregnancy, the dose being 10 milligrams iodine a week in chocolate-coated tablets. This way of prevention is better than the use of iodized table salt, because what may be good for children may not be harmless for adults. Since the extensive use of iodized salt in this country and Switzerland, more and more cases of induced hyper-thyroidism have been reported. The public has heard so much of iodine as a goiter reducing drug, that they buy the iodine in the drug store in the form of patent medicines and iodized salt, and do themselves much more damage than is usually recognized. Also in our profession it has not been sufficiently emphasized that patients over twenty-one, if given iodine at all, should be under weekly control, that they are not apt to respond permanently, and that it is useless and dangerous to treat adenomata with iodine.

The question is, when is surgery indicated in endemic goiters that cause no pressure symptoms and are not toxic? We know that adenomata, that is, well encapsulated nodular forms of goiter, resist medical treatment. Besides,

these adenomata may grow to large size and are very unsightly. They carry the danger of becoming toxic after the menopause, and it may be that they may become malignant, although the relationship between carcinoma of the thyroid and pre-existing adenomata is not quite clear. These adenomata, which may undergo cystic degeneration, are a definite indication for surgery. Iodine medication is dangerous in these cases, and injection of boiling water, alcohol, or iodine insufficient. Also large diffuse colloid goiters in adults, where medical treatment has failed, can be removed at the patient's wish, all the more as pressure symptoms are usually present, and there is a possibility of induced or secondary hyper-thyroidism.

*Mechanic* indication is present when the goiter exerts pressure on surrounding structures. In the first place the trachea must be considered. We can see all degrees of pressure, from a slight edema of the mucous membrane and difficulty in singing, to an almost entire obstruction with a softening of the tracheal rings, and great difficulty in breathing. In such cases, two x-rays, one in the antero-posterior and one in the lateral direction, will give us an exact idea of the compression of the trachea. Substernal goiters, which give a dullness over the sternum and a typical shadow on a chest film, are apt to cause pressure symptoms. If we recognize the lobe which is causing most of the pressure and attack that side first, we may save the patient a tracheotomy. Some goiters extending backwards, may compress the oesophagus, and cause difficulty in swallowing. Pressure on the jugular vein will cause congestion of the face; compression of the carotid artery will dilate the left heart. Symptoms of vagus and sympathetic compression may be present. A laryngological examination is very important for these large goiters, because they may cause a unilateral recurrent paralysis, which because of the gradual onset has been clinically compensated by the other side. These patients are not necessarily hoarse, and it is very important to know of this paralysis beforehand, because the slightest injury to the other side will result in a bilateral recurrent paralysis with all its dangerous consequences. This pressure paralysis due to thyroid enlargement may be relieved and the function of the nerve restored after thyroidectomy as I had occasion to observe in two cases.

\*Read before the South Chicago Branch of the Chicago Medical Society October 26, 1926.

In case of pressure symptoms, a reduction of the thyroid gland is indicated. In case of normal thyroid function, 3/5 of the gland may be removed without any harm, by the way of a bilateral wedge-shaped resection of the gland.

*Functional Indication.* The thyroid gland may function normally, may show hypo or hyperfunction. While extreme cases of hypofunction and hyperfunction have well defined clinical pictures, yet their exact grade can only be measured by the basal metabolic rate. It must be emphasized, however, that unless these rates are estimated with reliable apparatus and by an expert technician, their use does more harm than good. The basal metabolic rate is a valuable aid to the physician but it does not make the diagnosis for him. It is very important, however, to have an estimation of the metabolic rate before operation, because it will lead our surgery. In hypofunction, which may be present in the presence of a large cyst with a great deal of gland destruction, our surgery must limit itself to the enucleation of the adenoma. The cyst is shelled out without any ligatures of vessels and with a preservation of as much of the remaining glandular tissue as possible. This tissue, if relieved from the pressure of the cyst, may show normal function after the operation. If the metabolic rate stays below  $-15\%$ , thyroid extract may be given or thyroxin injected to restore function. A normal preoperative B. M. R. ( $-10$  to  $+10$ ) will permit a resection of 3/5 to 4/5 of the gland without running the risk of postoperative myxedema. A metabolic rate which is above  $+15\%$  and is reliably checked by consecutive readings, indicates, in the absence of other diseases that elevate metabolism, a hyperfunction of the gland. The operation to be done is a subtotal thyroidectomy, a removal of the entire gland with the exception of two small slices of the size of a lima bean on either side, with the preservation of the parathyroid bodies, and the recurrent laryngeal nerves.

Hyperthyroidism must be considered as an emergency operation just like an acute appendix, except that it is not the first 24 hours, but the first 6 months from the onset of symptoms, which will decide the ultimate result. If hyperthyroidism has persisted for longer than a year, and time has been lost by other measures, the degenerative changes in the heart, liver, kidney and muscles will make an invalid of the patient, even if the metabolic rate is reduced to normal.

These cases with auricular fibrillation, cardiac decompensation, high blood pressure, nephrosis and fatty muscles are bad risks, and their recovery is not so complete, as shown conclusively by Dr. Chas. A. Elliot at Wesley Memorial Hospital. The operation, however, is indicated, even in such cases, because it is astonishing to see the improvement even if the condition has been neglected.

An important factor in the operation for hyperthyroidism is a careful preoperative management. The patient should always be operated on during a remission, never during a crisis. This remission can be obtained in a large number of exophthalmic goiters with Lugol's solution, 10 drops 3 times a day in water. This medication should be given for from ten to twelve days, after which the operation must be done before a new rise in the basal metabolic rate occurs. Iodine in exophthalmic goiter is not a treatment but a preoperative measure.

The following table summarizes our indications for goiter operations. Naturally two or more of the indications may coexist in the same patient and transitions from one type to the other are frequent.

310 S. Michigan Avenue.

#### INDICATIONS FOR THYROIDECTOMY

Indication	Type of Goiter	Operation
A, Cosmetic	Large diffuse colloid goiters, resisting medical treatment, after 21 years of age.	Bilateral resection of 3/5 of gland.
	Single large adenomata, with or without cystic degeneration.	Enucleation.
B, Mechanical	Pressure on trachea, large vessels, esophagus, vagus, sympathetic, recurrent laryngeal nerves. All substernal goiters.	Bilateral resection of 3/5 to 4/5 of gland.
C, Functional	Hypothyroid, B. M. R. below $-15\%$ .	Enucleation of the adenoma.
	Normal function, if other indications, cosmetic or mechanic, are present.	3/5 of the gland.
	Hyperthyroid above $+15\%$ .	Subtotal thyroidectomy

#### INJURIES TO THE RECURRENT LARYNGEAL NERVE IN OPERATIONS OF THE THYROID GLAND

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With disease of the thyroid gland becoming more prevalent in this section of the country it naturally follows that surgery for its cure will be undertaken not only by those skilled in its technic but by surgeons less familiar with the



finer points in the anatomy of this region. One of the structures subjected to injury in ligation of the thyroid poles as well as in removal of the gland is the recurrent or inferior laryngeal nerve, which supplies the vocal chords. To ascertain the frequency with which this nerve is injured the author made a careful survey of the literature and the results are herewith set forth.

*Anatomy.* Reviewing the anatomy of the recurrent or inferior laryngeal nerve, it is recalled that the left one arises in front of the arch of the aorta, winds from before backward and ascends to the side of the trachea. The right arises anterior to the subclavian artery, courses from there backward around that vessel and ascends obliquely to the right side of the trachea behind the common carotid, either in front or behind the inferior thyroid artery. The nerve on each side ascends in the groove between the trachea and esophagus, passes under the lower border of the inferior constrictor muscle, entering the larynx behind the articulation of the inferior cornu of the thyroid cartilage with the cricoid, and is distributed to all the intrinsic muscles of the larynx except those comprising the ventricular bands, aryepiglottic folds and the cricothyroid. The recurrent laryngeal nerve supplies the muscles which close and open the glottis.

*Symptoms.* When one recurrent nerve is involved there is hoarseness but more particularly weakening of the voice. In a unilateral nerve injury not compensated by the uninjured vocal cord, aphonia, obstructive dyspnea and other symptoms result. When both nerves are involved there is complete aphonia, so that the patient can speak only in a labored voice. This may be followed by obstructive dyspnea, which if unrelieved may be a contributing or even a decisive factor in the patient's death.

*Diagnosis.* Examination with the laryngeal mirror in a bilateral paralysis shows the vocal cords lying relaxed midway between adduction and pronounced abduction—the cadaveric position. In a unilateral paralysis the affected cord assumes a similar position while the healthy side swings past its normal position in an attempt to meet its fellow, the sound arytenoid cartilage passing somewhat in front and beyond that of the affected side.

Judd says that preoperative mirror examination of the larynx gives the examiner exact and

positive information concerning the state of the vocal cords and is a protection to physician and patient. The larynx should be reexamined at the time the patient leaves the hospital to determine the presence or absence of any incompetency of the vocal cords.

Antoine states that there are two varieties of paralysis of the recurrent laryngeal nerve, first, that which can be diagnosed from the voice and breathing of the patient, and second, that which can only be diagnosed by laryngoscopic examination.

Schneider states that in considering injuries to vocal function following thyroidectomy, one should always remember that the trouble may have been present before operation. The troubles due to injury of the nerves fall into two classes, contusion lesions and division.

Late paralysis, beginning several days after operation, is explained by endoneural hemorrhages or perineural processes which particularly appear secondarily in wound infections. In late paralysis the patient can talk well following operation but in the course of three or four days severe dyspnea appears and tracheotomy is required in a few hours.

*Frequency of Injury.* According to Crotti injuries to the recurrent laryngeal nerve during thyroidectomy are relatively frequent, occurring in from 7 to 35 per cent of the cases. The frequency of their occurrence varies directly with the conscientiousness with which routine postoperative laryngoscopic examinations are made.

Dubs in 840 goiter operations reports 26 cases of recurrent nerve injury and Capelle in 1,700 bilateral resections had 1.3 per cent permanent injuries.

Judd in reviewing the thyroidectomies performed at the Mayo Clinic over a long period of years found no cases of permanent paralysis of the recurrent laryngeal nerve. They had observed many patients with some disturbance of phonation, of respiration or of both at various periods, but the voice and breathing always returned to normal.

Schneider reports 17 cases of postoperative hoarseness in a series of 32 thyroidectomies.

Antoine, in 1924, collected 23 cases of paralysis of the recurrent laryngeal nerve from the literature and added three of his own. An analysis of these 26 cases is interesting. Of the 23, six were not examined with the mirror.

Three of the six had only a transient hoarseness, two had a bilateral posterior paresis and one patient become aphonic suddenly several weeks after the operation and remained so. In five cases the patients had a normal picture immediately after the operation or when dismissed so that the paralysis can be regarded as a late injury. In three cases there was slight paralysis which disappeared in a few days; in three others the injury was not attributed to the operation, and in one the paralysis did not appear until ten months after operation and then came on following exertion. It improved under iron medication and faradization. In another case the paralysis appeared seven weeks after operation, although on examination sixteen days after operation, the vocal cords had been normal. In two cases laryngoscopic examination before operation revealed paresis of the vocal cords. After the operation their condition was so good that another examination was not made. In one case aphonia appeared after three days and in the other dyspnea appeared a year later, requiring tracheotomy. In another case the patient had a normal picture before operation; after operation the voice was slightly involved and on the nineteenth day when the suture on the right side was removed, bilateral posterior paresis appeared. This increased as time went on and after a year tracheotomy was necessary. Of the nine other cases, the laryngoscope was only used after the paresis began to present itself, which was a long time after operation. Immediately after operation three were entirely free of trouble, while the other six had some disturbance of breathing or of speaking.

In Antoine's own cases none were examined with the laryngoscope after operation before onset of the paralysis. In the first case dyspnea appeared on the third day and the patient had to be tracheotomized immediately. There was a paralysis on the right side and a high grade posterior paresis on the left. The paresis on the left side disappeared in five weeks, but the right sided paralysis was present one year later. In the second case there was injury not only of the recurrent but also of the hypoglossus and the vagus. The injury to the recurrent was symmetrical. In the third case there was a unilateral paralysis of the recurrent several weeks after operation with hoarseness. The patient was clinically cured in five months.

The author is of the opinion that the cause was acute interstitial neuritis (edema) of the inferior laryngeal nerve. The neuritis developed as a collateral inflammation due to the inflammatory processes in the region of the wound.

Berard reports four cases of injury to the nerve and concludes that the pathogenic elements of a transitory paralysis of the recurrent after goiter operations are, in order of frequency, first, pulling on the inferior vascular pedicle and upon the recurrent in the act of luxation or delivery of the goiter; second, incomplete lesions of the nerve by rough separation during ligation of the thyroid artery in the region of the pedicle; third, rarely, the cicatricial retraction of the tissues at the level of hemostatic sutures in the region of the recurrent or the inhibition of one or two denuded nerve trunks by serous exudate from the thyroid stump or by hemorrhage from the neighboring region. He advises laryngoscopic examination during each stage of the convalescence, for there are a number of cases of section of the recurrent with cadaveric position of the cord which seem to undergo spontaneous cure due simply to vocal adaptation by more pronounced displacement of the healthy cord toward the median line.

Kopp discusses the results obtained in his clinic. His material included 781 cases of ordinary goiter, 10 of exophthalmic goiter, 16 of malignant goiter and 5 of strumitis. The recurrent laryngeal nerve was injured fourteen times (1.7 per cent of all operations) during the operation. In three cases it occurred during deep loosening of the upper pole, twice by ligation of the inferior thyroid artery and loosening of the lower pole, three times by resection of the posterior glandular layer, and in four cases where the cause could not be found. In these last cases it is certain, however, that the injury did not result from ligation of the inferior thyroid artery. From a purely anatomical viewpoint ligation of the inferior is the most dangerous procedure for the recurrent laryngeal nerve, yet injury to the nerve occurs least often here. This is probably because the danger here is recognized and avoided.

Pemberton classifies the clinical effects of permanent injury to the recurrent laryngeal nerve as follows: Injury of one nerve may produce only a change in voice, varying from a very slight elevation in pitch to a marked



hoarseness. Injury of both nerves or even of only one may result in postoperative dyspnea. Injury to both nerves may result in the cords immediately occupying the cadaveric position with complete loss of voice. His co-worker, New, has traced all the patients in this group, and almost invariably the voice has returned in from three to six months, with the accompanying development of dyspnea.

*Experimental Work.* In 1918 Judd, New and Mann studied the effect of trauma on the recurrent laryngeal nerve in experimental animals. Their conclusions were that section of the nerve produces complete paralysis of the vocal cord of the corresponding side, which in all probability will be permanent; that ligation of the nerve with linen, chromic catgut or plain catgut produces complete and probably permanent paralysis of the vocal cord of the corresponding side; that stretching the nerve acutely in a manner similar to but of longer duration and intensity than occurs in operation does not impair the function of the vocal cord; that stretching the nerve for a long period, as over muscles, impairs the function of the vocal cords but the impairment is probably due to operative trauma and not to the stretching; and finally that pinching the nerve with a hemostat in a manner similar to that which occurs in an operation produces temporary paralysis of the vocal cords. They found that restoration always occurred, the length of time necessary depending on the anatomical point at which the nerve was crushed. Exploration of the nerve produces an effect on the vocal cords depending on the amount of trauma to which the nerves are subjected, but careful dissection will probably not produce any effect.

Judd, in a later paper, stated that while any trauma to a recurrent nerve is serious, the effects so far as function is concerned are only temporary.

Colp and Louria during the past year carried out some experiments on dogs to study the effect of stimulation of the recurrent laryngeal nerve under anesthesia with varying degrees of the faradic current. The larynx was examined by means of a Brown-Buerger urethroscope, which because of its convenient size gave an excellent view of the interior of the larynx. When the animal was under deep ether anesthesia there was an abduction of the cords with no response

to stimulation of the recurrent nerve. Under light narcosis stimulation of the nerves caused complete dilatation, the vocal processes of the arytenoid cartilages were turned outward and a large opening was maintained during the time stimulation was continued. As the narcosis became less, a series of mixed movements took place. Their results confirmed those of Hooper in 1887.

If the inferior laryngeal nerves of the dogs were cut the cords assumed the cadaverous position. They lost their bark, there was some difficulty in deglutition and the dyspnea which was present became quite marked, especially on undue exertion. However, these dogs took the anesthetic fairly well and at no time during or following the various operative procedures to which they were subjected did any of them die or show increased dyspnea. This bears out the statement made by Frey in 1887, that immediate death in a dog from double inferior laryngeal nerve section had never been reported.

Although many methods of traumatization were tried in these dogs, the only result obtained when any pressure was exerted on the recurrent laryngeal nerve was paralysis of the vocal cord of the corresponding side.

In 1916 Pool in a paper before the New York Academy of Medicine presented the results of some investigations made to determine whether the theoretical advantages of leaving a portion of the posterior part of the lobe, that is, the part in relation to the recurrent laryngeal nerve and the parathyroid bodies, have sufficient anatomical basis to outweigh the practical disadvantages of the procedure. These studies based on twenty-five dissections led him to conclude that the recurrent laryngeal nerve is relatively immune from injury when a true intracapsular extirpation of a lobe is made, although in attempting to carry out this procedure the capsule may be torn quite easily at its posterior part and the cellular plane which contains the recurrent nerve may be entered in the dissection and the nerve injured. This danger is avoided by leaving in situ a portion of the posterior part of each lobe.

*Prevention and Treatment.* The pioneer workers in the field of thyroid surgery early recognized the danger of injury to the recurrent laryngeal nerve and formulated the plan of leaving the posterior part of each lobe. It is commonly

believed that the nerve lies posterior to the lobe of the gland and by preserving the posterior part of the lobe, a barrier is established between the operative field and the nerve behind. In the normal size gland this is true and the precaution is generally effective. However, where the enlargement of the gland takes place in all directions, the position of the nerve becomes posteromesial to the lobe. When this is the case two principles must be kept in mind, the preservation of the posteromesial portion of the lobe, and the avoidance of exposing the lateral wall of the trachea. Pemberton has, therefore, devised a method of resecting the lobe from within out.

When bilateral abductor paralysis has occurred Judd suggests dissecting the recurrent laryngeal nerves from the scar tissue, in the hope that by freeing the nerves the pressure of the contracting scar might be relieved and enable the nerve to functionate normally. He has also considered performing a plastic operation on one vocal cord in order to give more breathing space, but he has hesitated to do this because of the fear of interfering with the voice. Usually when this fear is explained to the patient, he prefers not to take any chance on having phonation disturbed.

#### CONCLUSIONS

1. Injury to the recurrent laryngeal nerve occurs in operations on the thyroid gland but the percentage of occurrence is comparatively low when compared to the great number of operations that are performed yearly.

2. The operator should examine the larynx before operation to ascertain the condition of the vocal cords and again before the patient leaves the hospital to determine whether there is an incompetency of the vocal cord.

3. In the case of bilateral paralysis dyspnea may result which unless promptly treated will result fatally.

4. In the case of unilateral paralysis, producing hoarseness or bilateral paralysis producing total loss of voice most of the authorities report clinical cures in from three months to one year.

5. Injury to the nerve may be avoided by careful technic and by leaving a portion of the posterior part of each lobe.

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#### SUBPHRENIC ABSCESS\*

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WINNETKA, ILL.

J. M., a boy of eight years, came home from school on Oct. 22, 1926, with a pain in his abdomen and vomiting. An osteopath was called and he attended the child for three days until Oct. 25, when obviously being worse, a pediatricist, Dr. C. A. Aldrich, was called who in turn immediately summoned the writer. At this time the boy appeared to be acutely ill. The abdomen was uniformly distended, somewhat rigid, and tender. There was increased tenderness in the right lower quadrant. The temperature was 102 degrees, the pulse 120-130, and the respiration 36. The leucocyte count was 16,800. The patient was taken to the Evanston Hospital and a laparotomy performed. On opening the peritoneum a large amount of free, watery pus gushed forth. A gangrenous appendix, evidently the cause of the generalized peritonitis was removed by "ligation and drop" method. Three rubber tubes were used for drainage. The

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boy was immediately placed in Fowler's position and fluids were pushed.

The pathologist's report was as follows: "A swollen and gangrenous appendix 8.9x1.3 cm. in maximum diameter. The serosa is thickly coated with fibrino-purulent exudate and along the mesenteric attachment markedly hemorrhagic. The lumen is filled with blood-tinged and foul-smelling purulent material and at the junction of the proximal and middle thirds there is impacted a fecal concretion 1.1 cm. in diameter. The lining mucous membrane is everywhere necrotic.

Diagnosis: Acute fibrino-purulent and gangrenous appendicitis with fecal concretion.

For the first week the convalescence was fairly



Fig. 1. X-ray appearance of a case of subphrenic abscess.

satisfactory, although the temperature was never less than 100 nor the pulse less than 110. Beginning the seventh day the evening temperature began to be higher each day until the 12th day it reached 103.6 and the pulse averaged 120-130. On this day the patient was anesthetized and the wound explored by finger and a rectal examination made. No evidence of abscess was found however. During these days a very striking thing was the patient's more or less constant complaint of *pain in the neck*. This pain was in the right side of the neck above the clavicle. On the 13th day Dr. Aldrich noted an area of dullness of the right lower chest. On

this day the patient was seen by the late Dr. Albert E. Halstead who was of the opinion that there was a subdiaphragmatic abscess. The leucocyte count was 25,000. X-ray examination, Fig. 1, was reported by Dr. E. L. Jenkinson as follows: "The right diaphragm is greatly elevated, extending upward to the third rib anteriorly. The heart is displaced to the left. The left diaphragm is normal. The elevation of the right diaphragm is probably due to a subdiaphragmatic abscess with compression of the right lung." On the 15th day (11-9-26) under ethylene anesthesia an operation for subphrenic abscess was done. A four-inch incision was made over the right tenth rib in the posterior axillary line. About  $3\frac{1}{2}$  inches of the rib was resected subperiosteally. Incision was then made through the visceral pleura into the pleural cavity itself. There was no evidence of infection in the pleural cavity and the lung had retracted above this incision. The visceral pleura was now sutured to the parietal pleura which covered the dome of the diaphragm in an elliptical manner leaving a space some  $1\frac{1}{2} \times 1\frac{1}{2}$  inches through which to incise the diaphragm. The latter was then incised and 800 cc of foul-smelling pus poured out. Cultures of this fluid showed various organisms including gram negative bacilli, gram positive cocci in pairs and chains, and gram positive bacilli. The abscess cavity was cautiously explored with the finger but no accessory pockets were located. The skin was sutured to the periosteum, in order to have less painful granulation area at dressings, and a rubber drainage tube was sutured in place. The temperature quickly subsided but three days later an abscess over the right inguinal ring became evident. Under nitrous oxide gas this abscess was incised and 1-2 ounces of thick, creamy pus evacuated. From this time on the convalescence was uneventful. The discharge from the subphrenic abscess diminished in quantity daily. Thirty days after admission the patient was discharged from the hospital to his home in care of a nurse. He rapidly gained in weight and three weeks later the wounds were completely healed and the child was in excellent health.

A subphrenic, or as it is sometimes called, a subdiaphragmatic, abscess refers to a collection of pus between the diaphragm and some sub-jacent organ. The term has also come to in-

clude practically all abscesses one part of which are in contact with the diaphragm.

This condition which is the most serious of the intra-abdominal abscesses was first described in 1845 by Barlow and the first operation was by Volkmann in 1879. Since then there has accumulated a large and interesting literature on this subject.

Following Barnard<sup>1</sup>, the area under the diaphragm is generally divided into six spaces, viz., the anterior and posterior right intra-peritoneal, the anterior and posterior left intra-peritoneal, and the right and left extra-peritoneal. The four peritoneal spaces are separated from each other by the coronary, falciform and right and left lateral ligaments of the liver. As will be seen the etiology and incidence varies according to the space involved.

About two-thirds of the cases of subphrenic abscess are the result of contamination from a viscus within the abdomen, either before or following operation; one-sixth are the result of extension from an adjacent abscess, and one-sixth come from distant foci of infection.<sup>2</sup> A review of 1,000 collected cases showed that the focus of infection was the stomach and duodenum in about 30 per cent., appendix 21 per cent., biliary tract 16 per cent. Infections of the liver, kidney, spleen, pancreas, female pelvic organs, pleura, lungs, lymph glands in the vicinity, etc., are also causes of subphrenic abscess.<sup>3</sup> In 3,391 consecutive cases of acute appendicitis at the German Hospital, Philadelphia, there were 30 cases of subphrenic abscess or 0.8 per cent.<sup>21</sup>

TABLE 1  
Causes and Varieties of Subphrenic Abscesses (After Barnard<sup>1</sup> and Fifield and Love<sup>4</sup>)

Cause	Right extra peritoneal	Right Ant. intra-peritoneal	Right Post. intra-peritoneal	Left Ant. intra-peritoneal	Left Post. intra-peritoneal	Left extra peritoneal	Total
Appendix	13	16	18	1	0	0	48
Gall Bladder (hepatic abscess)	15	7	5	1	1	0	29
Gastric Ulcer and operations on stomach	0	6	5	27	7	1	46
Duodenal Ulcer	3	4	7	3	1	0	18
Totals	31	33	35	32	9	1	

From a consideration of Table 1 it will be seen that those subphrenic abscesses due to the appendix are practically entirely on the right side and most frequently in the right posterior intra-peritoneal space. Those due to gallbladder and hepatic abscesses are also on the right and most

frequently occur in the right extra-peritoneal space. The abscesses due to the stomach are predominately in the left anterior intra-peritoneal space.

TABLE 2

Age	Incidence (After Barnard <sup>1</sup> and Fifield and Love <sup>4</sup> )						
	0-10	11-20	21-30	31-40	41-50	51-60	61-70
Cases	12	20	48	32	26	12	3

The majority of the cases occur in the 3rd and 4th decades. Cases in the 1st decade are unusual, although Evans<sup>5</sup> reports one at five years and Sperling<sup>6</sup> as early as 16 months.

Fifield and Love<sup>4</sup> have given an excellent classification of the causes of infection of the subphrenic space.

1. Wounds.
2. Gravitation of inflammatory exudate from general or local peritonitis or of extravasated contents of a viscus (spontaneous or operative).
3. Hematogenous infection.
4. Direct extension from a neighboring viscus—e. g., rupture of a liver abscess into the right extraperitoneal space.
5. Lymphatic spread:
  - (a) The retroperitoneal lymphatics.
  - (b) The diaphragmatic lymphatics. There are supra and infra-diaphragmatic plexuses intercommunicating freely. If there be pus under pressure above the diaphragm, infection may spread through to the subphrenic spaces, but the extension of infection in the opposite direction is a very much more frequent occurrence.
  - (c) The lymphatics along the deep and superior epigastric vessels communicate with those in the falciform ligament.

The same authors have found the relative frequency of the infecting organisms to be: B.coli, 14; staphylococci, 14; streptococci, 4; pneumococci, 1; Friedlander group, 1; sterile, 8. About one-third of the abscesses contain gas.<sup>7</sup>

The prognosis in cases of subphrenic abscess is very serious. According to Lockwood<sup>2</sup> between 85 and 100 per cent. of all patients not operated on die and death has occurred in 56 per cent. of all patients operated on and not operated on. From 23 to 40 per cent. of those operated on have died. Lockwood believes with Moynihan that the mortality rate should be about 16 per cent. and believes that in the great majority of the fatal cases in which operation was performed, drainage was incomplete.

Rarely an abscess will resolve. If untreated it may rupture through the diaphragm and into



the lung or pericardium. It may burst into the stomach and be vomited, into the colon or duodenum and be evacuated in the stool. It may come through the skin anteriorly or perforate into the retroperitoneal tissue and burrow extensively, even reaching the posterior cul-de-sac in the pelvis.<sup>2</sup> There was a spontaneous rupture of 23 of Barnard's<sup>1</sup> 76 cases. The rupture was into the stomach in 8 cases; a bronchus, 4; left pleura, 3; right pleura, 2; intestine, 2; general peritoneum, 1; skin at umbilicus, 1; skin at right hypochondrium, 1. Fernstrom<sup>8</sup> reports opening a subphrenic abscess containing gall-stones. The necrotic gall-bladder had been previously expelled in vomit. The patient recovered. Lee<sup>10</sup> reports 4 cases of "subphrenic inflammation" with the appropriate physical signs and x-ray appearance which recovered spontaneously without suppuration.

The diagnosis of subphrenic abscess may present great difficulty and many of the cases (about 20 per cent.) are unrecognized until necropsy (27 of 117 cases in Mayo Series). Fifield and Love<sup>4</sup> remind us in obscure abdominal cases where symptoms of infection are present to bear in mind the aphorism "Pus somewhere, pus nowhere else, therefore, pus under diaphragm."

The history is of greatest importance. There has been an infected focus in the abdominal cavity as a gangrenous appendix, empyema of the gall-bladder, perforated ulcer, etc., which has been dealt with surgically. The patient has improved temporarily and then symptoms of infection supervene. The quiescent stage may be absent or may be as long as five months.<sup>12</sup> Whipple<sup>9</sup> groups subphrenic abscesses into three groups according to the symptoms of onset: 1st, those with relatively sudden onset of acute abdominal symptoms; 2nd, those with insidious development, and 3rd, those following operations involving the subphrenic space.

Elevation in temperature, generally of the church steeple type with afternoon maximums of 102 degrees or more together with an increase in the leucocyte count and possibly with chills, suggest infection or abscess. If these symptoms a laparotomy where an infective focus has been removed and where there is neither wound abscess nor collection of pus in the pelvis, subphrenic abscess is to be suspected.

The pain in subphrenic abscess may at times be practically pathognomonic of this condition. In 1922 Capps and Coleman<sup>11</sup> stimulated the peritoneum of the under surface of the diaphragm by means of a long silver wire passed through a trocar in the abdominal wall and found the resultant pain was never in the diaphragm itself but at some distant point. Stimulation of the outer margin caused diffuse pain over the lower costal region and subcostal abdominal wall. *Stimulation of the central portion of the diaphragm produced pain sharply limited to a point somewhere along the trapezius ridge in the neck.*

Pain in the neck is highly suggestive of the upward pressure on the diaphragm caused by a subphrenic abscess. An abscess at the periphery of the diaphragm would cause costal pain.

In 60 per cent. of Lockwood's<sup>2</sup> cases and 30 per cent. of Fifield and Love's<sup>4</sup> there was a visible or palpable swelling in the abdomen or loin. Examination of the chest by auscultation and percussion is very important. Compression caused by fluid below the diaphragm may cause physical signs closely resembling a lesion in the chest.<sup>13</sup> If gas is present in the abscess there may be four zones of altered resonance: 1, dull area due to liver and pus of the abscess; 2, tympany due to the gas; 3, zone of diminished resonance due to partial collapse of the lung by pressure and 4, normal lung resonance. There may be diminution or absence of breath sounds and vocal fremitus. In Whipple's<sup>9</sup> series of 32 cases of subphrenic abscess there were 10 cases in which there was an associated empyema which preceded or followed the abscess; four of them had pleurisy with effusion and seven had pneumonia.

Roentgenological examination by means of full-sized stereoscopic plates and thorough fluoroscopy is of the utmost importance. In subphrenic abscess the elevation of the diaphragm above its normal level of the 5th rib is apparent in the x-ray. The outline of the diaphragm is more uniform than in cases where the elevation is due to a liver abscess,<sup>2</sup> although a local collection of pus may cause some irregularities in the outline.<sup>4</sup> The normal excursion of the diaphragm in deep respiration is one to one and one-half inches;<sup>4</sup> in subphrenic abscess this excursion is diminished. It may, however, be mov-

able even with a high arch.<sup>20</sup> The presence of gas in the abscess is detected by the x-ray. The air bubble rises to the highest point and by shifting the body in various angles alterations in the pus level below the gas and of the position of the gas bubble itself serve to localize the abscess. Le Wald,<sup>4</sup> in his interesting paper calls attention to the importance of lateral exposures.<sup>10</sup> If there is no gas, Sommer<sup>15</sup> withdraws 30 cc of fluid and injects air but this method is open to considerable objection. Castex, Romano and Gonzales<sup>16</sup> injected lipiodol in a case of suppurated hydatid and gas cyst on the upper surface of the liver. Lilienthal<sup>17</sup> has ruled out subphrenic abscess in a doubtful case by injecting air in the abdominal cavity, placing the patient in the upright position and demonstrating by x-ray a thin curved air space between the liver and the diaphragm. Dexter<sup>18</sup> made a careful study of x-ray findings in five cases and tabulated his results as follows:

	Cases	%
Diaphragm arched and displaced upward.....	5	100
Movement of diaphragm absent.....	5	100
Lateral displacement of the heart.....	0	0
Subphrenic air bubble, fluid level.....	3	60
Cloudy costophrenic angle.....	4	80
Infiltration of base and lung.....	4	80

The obliteration of the costophrenic angle is an important diagnostic sign indicating empyema instead of subphrenic abscess. The following case of empyema is illustrative of this point:

Mrs. C. H. D., aged 65 years, was admitted to the Evanston Hospital on Jan. 19, 1926. For the four weeks previous to admission she had been in the care of Dr. John H. McClellan for pneumonia. For the last two to three weeks there had been pain in the right chest which is affected by inspiration and expiration and by changes in position. The physical examination showed dullness in the right lower chest which was thought to be due to an increase in the liver area. The temperature was 100, pulse 110 and respirations averaged 30. On Jan. 19, 1926, Dr. E. L. Jenkinson, the radiologist, reported "The diaphragm elevated on the right. A dense shadow just below the diaphragm on the right which may be due to an abscess of the liver. The left diaphragm is normal." On Jan. 21, the x-ray report was, "There is a circumscribed shadow about the size of a baseball located in the upper right quadrant, below the diaphragm, which has the appearance of a localized abscess. There is some fluid in the right costophrenic angle." On Jan. 24, the x-ray report was "Fluid in the right costophrenic angle above the diaphragm with consolidation of the right base. Probable liver abscess."

By this time the change in the x-ray findings seemed to make the diagnosis of empyema more probable.

Dr. Ralph Bettman who saw the patient at this time believed the case to be one of empyema. The leucocyte count was 7,200, the urine, negative.

On Jan. 24, 1926, under nitrous oxide anaesthesia, an incision was made between the 5th and 6th ribs in the posterior axillary line. On entering the pleural cavity a considerable quantity of pus escaped. Two rubber tube drains were sutured in place and the skin was stitched to the periosteum. The convalescence was rapid and uneventful.

Practically all writers warn of the danger of needling for diagnosis. Should all other methods fail, this method should only be resorted to and then only in the operating room with immediate operation to follow should pus be found. Hirsch<sup>19</sup> reports a case in which 23 unsuccessful punctures were made in the area of absolute dullness above the liver. A successful puncture was finally made in the area of relative dullness after the abscess had been shown by x-ray. Barnard<sup>1</sup> (quoted by Moynihan) reports the use of the aspirating needle in eighteen cases of subphrenic abscesses (in some of which it was used several times) as follows:

	Cases
Failed to diagnose .....	11
Pus .....	7
Foul pus .....	2
Anchovy pus .....	1
Pus and serum.....	1
Clear serum .....	4
Blood stained serum.....	2
Gas .....	2

The differential diagnosis may be difficult. Empyema, liver abscess, pyelophlebitis and perinephritic abscess may closely simulate subphrenic abscess. Aortic aneurysm, pancreatic cysts, and renal tumors have been mistaken for subphrenic abscess.<sup>4</sup>

The *prophylactic* treatment of subphrenic abscess is the adoption of Fowler's position in all cases where there is contamination of the peritoneum and efficient peritoneal drainage. Whipple<sup>9</sup> advises turning the patient over on his face two or three times a day for a week in cases of upper abdominal drainage. Fifield and Love<sup>4</sup> note that but one case of subphrenic abscess occurred in 228 cases of acute appendicitis at the London Hospital treated on delayed lines (the appendiceal symptoms allowed to subside and localize) whereas in 1,109 cases subjected to immediate operation there were 7 cases of subphrenic abscess. Stab wound in the loin is efficient aid to abdominal drainage.

The *actual* treatment is essentially surgical. Ethylene anesthesia is very satisfactory. Paravertebral anesthesia with 1 per cent. novocain



is preferred by Lockwood.<sup>2</sup> The abscess must be efficiently drained and the route of approach to it varies with its situation. The five main routes are: 1st, by incision through the anterior abdominal wall; 2nd, by incision along the lower costal margin; 3rd, by incision through the chest wall and diaphragm (the transpleural route); 4th, by a combination of the thoracic and abdominal incisions; 5th, by the retroperitoneal route.

Abscesses which bulge forward into the epigastrium are suitable for the anterior abdominal wall incision. Abscesses on the left side must always be approached first from the front and if this method is unsuccessful the posterior incision is used.<sup>22</sup> The transpleural operation is that most frequently employed. In this operation an ample incision (5-6 inches) is made over the 9th or 10th rib on the right side (and over the 7th or 8th on the left side<sup>7</sup>). Three or four inches of the rib is resected subperiosteally. The incision is deepened and if it is possible the lower margin of the pleura which has the appearance of a hernial sac, is pushed upward by blunt (gauze) dissection and the incision is deepened through the diaphragm. Most frequently the visceral pleura is cut through and the clean pleural cavity is entered. The wound may be packed with gauze and the incision of the diaphragm deferred for 24 hours until protective adhesions have formed between the visceral and parietal pleura. A better method is carefully to suture together the visceral and parietal pleura so as to make a sort of elliptical window through which the diaphragm presents. Most authors still wait for 24 hours before incising the diaphragm. This delay seems unnecessary if the suture has been carefully made and protected by gauze. The skin is sutured down to the cut periosteum in order to obviate much of the painful granulating area which complicates the dressing. The diaphragm is incised by a 1-2 inch incision and after the pus has poured out the interior is carefully explored by the gloved finger for pockets. Two rubber tubes are then sutured to the periosteum and dressings are applied (vaseline gauze to wound edges). Many authors gently wash out the abscess cavity; this seems unnecessary and perhaps unwise. Lockwood<sup>2</sup> makes his incision *between* the 10th and 11th ribs, sutures the muscles and skin to the diaphragm before opening the latter and

uses an electrically lighted self retaining rib retractor.

Nather and Ochsner<sup>28</sup> make a subperiosteal resection of the entire 12th rib and a transverse incision of the musculature below the bed of the resected 12th rib. The musculature is separated from the renal fascia by blunt dissection and the diaphragm and pleura are carefully elevated by retractors. By the index finger the peritoneum is carefully separated from the under surface of the diaphragm until the abscess is reached and broken into. The infrahepatic space may be explored through the incision. These writers claim for this operation: 1st, both supra and infra hepatic abscesses may be treated at the same operation. (They maintain sub and supra hepatic abscesses occur in 50 per cent. of cases of subphrenic abscess complicating appendicitis); 2nd, there is no danger of contaminating an unaffected pleura or peritoneum. Grunewald<sup>24</sup> found that in 28 per cent. of subphrenic abscesses opened through a normal pleura, and in 35 per cent. of cases in which there existed sterile fibrinous adhesions, empyema developed in spite of the various operative procedures employed to protect the pleura. The pleura is sterile in some 75 per cent. of cases of subphrenic abscess; 3rd, quicker healing; 4th, abscess drained at its most dependant portion; 5th, less shock; 6th, facility in exploring for retroperitoneal, retrocecal and perinephritic abscesses.

To attempt to decide which is the safest operation by the mortality statistics in the different types would be unfair as the choice of operation varies with the type of abscess. None the less the following table is of interest:

Piquand<sup>26</sup> (890 cases)

Route	Recovered	Died	Mortality per cent
Abdominal .....	135	79	36
Lumbar .....	36	11	23
Transpleural .....	142	68	33
Fifield and Love <sup>4</sup> (78 cases)			
Abdominal .....	16	5	23.8
Lumbar .....	5	1	16.7
Transpleural .....	18	14	43.7

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## TREATMENT OF ANEURISM OF THE AORTA BY WIRING AND ELECTROLYSIS

### REPORT OF CASE AND AUTOPSY FINDINGS

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Aneurism of the thoracic aorta when progressive and unchecked by treatment is usually fatal. Death may be due to rupture either externally or internally, to interference with circulation especially when the coronary orifices are involved, or to pressure phenomena. Boyd<sup>1</sup> in an analysis of 4,000 reported cases of thoracic aneurism finds that of 830 cases in which complete records were kept only 7.7 per cent. lived beyond four years. This rate includes those small aneurisms which were under anti-luetic management.

Because of the inaccessible location, surgical treatment has not been as fruitful in thoracic aneurisms as it has been in aneurisms in other locations. Spontaneous cure of sacculated aneurisms has occurred. Cases have been found at autopsy which during life had not been detected. In these cases there has been found a fibrinous laminated clot adherent to the walls and filling the sac. Various attempts have been made to imitate this spontaneous cure by the use of those measures which favor the clotting of blood in the aneurismal sac. This was attempted by the introduction of foreign bodies and later by the use of an electric current.

Velpeau in 1831 introduced the use of needles for transfixion of the sac, while Ciriselli in 1861 used electrolysis with needles introduced into the sac. Moore in 1864 employed fine iron wire introducing about 26 yards through a cannula

into a thoracic aneurism. This method of Moore was supplemented in 1879 by Corradi who passed a constant current through the wire. With only slight modification this latter method is still in use.

Lusk<sup>2</sup> in studying the mechanism of clot formation following the Moore-Corradi procedure states that the wire must be brought extensively into contact with the intima so that the electric current can traumatize the latter in lines of close approximation. This is necessary since without it the opportunity for the organization of fibrin is lacking.

Following wiring with or without electrolysis



Fig. 1. Arrow shows bulging aneurism

there is usually a diminution of pain which is the most distressing subjective symptom in large thoracic aneurisms. Torrey<sup>3</sup> explains this cessation or diminution of pain as due to the clot formation which reduces the fluid contents of the sac and thus modifies the coronary circulation.

Eshner<sup>4</sup> reviewed the literature of the subject to 1910 and found 38 cases reported with few details as to the length of life following the operation. Finney<sup>5</sup> in 1912 reported 21 additional cases. Since then Hare<sup>6</sup>, Sailer<sup>7</sup>, Forbes<sup>8</sup> and others have reported cases treated success-



fully by this procedure but records of length of life following the operation are usually not mentioned. This is due to the fact that the majority of these patients are hospital cases admitted to the charity wards and follow-up notes are difficult to collect.

The following case is reported because of the



Fig. 2. X-ray of chest following wiring of aneurism

complete history over a period of four years following the operation and the interesting autopsy findings.

This is the only one of our series of 8 cases which we have been able to follow so closely.

G. S., aged 56 years, single, entered the Cook County Hospital, March 25, 1922, complaining of pain in the sternal region, pulsating tumor of the chest, weakness, dizziness and blurring of vision. Pain which was constant in character in the mid-sternal region was present at the site of a swelling. The latter had been present for the last five years and had suddenly become larger during the last four months so that at the time of admission it was the size of an orange. At times pulsations were noted in this swelling.

Examination shows the chest to be fairly symmetrical with an increase in the antero-posterior diameter. There is a mass on the anterior chest wall approximately 6 cm. in diameter and extending about 4 cm. from the chest wall, (Fig. 1). This is seen to pulsate. There is no tumor posteriorly. Mediastinal dullness is increased. The heart is definitely enlarged. A systolic murmur is present but no diastolic murmur. BP 164-90. Blood, Wassermann, 4

plus. Urine, negative. Diagnosis: Aneurism of the aorta with erosion of Sternum.

Operation, March 31, 1922. Under local anesthesia a small incision was made over the aneurismal bulging. Lacquered spinal puncture needle, gauge 23, was inserted into the aneurismal sac, obturator removed and 15 feet of silvered steel wire, gauge 30, slowly uncoiled. The positive pole of an electric current was attached to the wire. The negative pole was attached to a plate on the patient's back and the current begun at 5 milliamperes and gradually raised to 75 milliamperes over a period of 30 minutes. The wire coil was cut and the end slowly pushed into the aneurismal sac with the obturator. The spinal puncture needle was removed, the skin closed with silk worm gut suture and the wound dressed, (Fig. 2).

Patient was in fair condition when discharged one month later.

On December 21, 1922, the patient was readmitted to the hospital because of episternal pain. At this time the tumor was smaller than formerly, being about the size of a walnut. The scar of the



Fig. 3. AA' Sternum cut vertically and edges separated. 1. Skin. 2. Laminated clot containing strands of wire. 3. Aortic orifice. 4. Arch of aorta (opened). 5. Descending aorta (opened).

operation was nearly flat on the chest wall instead of being over the apex of the tumor and a new point of bulging was present above and to the right of the old one.

On January 10, 1923, under local anesthesia puncture was made at the point of greatest bulging and pulsation and 26 feet of No. 29 gauge piano wire was

inserted. Galvanic current was attached and gradually increased to 75 milliamperes in 30 minutes.

Following this the pain decreased and the general condition was much improved when the patient went home.

On April 23, 1926, the patient re-entered the hospital because of a cough with bloody expectoration.

Examination at this time showed the patient to be acutely ill. At the lower end of the sternum a mass the size of a small orange is present, expansible and pulsating. There is increased tactile fremitus, dullness and bronchial breathing over the right upper lobe. Diffuse large rales are present throughout the chest.

Diagnosis: Pneumonia.

The patient died April 25, 1926, i. e., 4 years and 1 month after his first operation and 3 years and 3¼ months after the second operation.

Anatomic diagnosis: Aneurismal erosion and perforation of the sternum; aneurismal compression atelectasis of the right upper pulmonary lobe; focal and confluent broncho-pneumonia of the left lung; marked bilateral obliterative fibrous pleuritis; hydro-pericardium; concentric hypertrophy of the right cardiac ventricle; moderate scarring of the myocardium; moderate stenosis of the coronary orifices; partial aneurismal compression of the right pulmonary artery; moderate arterio-sclerosis of the aorta with calcification; syphilitic aortitis; ancient wiring of aneurism arising from apex of aortic arch. The entire ascending aorta was a sac 11 cm. in antero-posterior diameter, 8 cm. in width and 8 cm. in depth. This was partially filled with a large laminated ante-mortem clot within which were loops of fine wire, (Fig. 3).

#### DISCUSSION

Although in recent years the number of cases of aneurism eroding the sternum has materially decreased, there is still a considerable number of those observed which might be benefited by wiring. The Moore-Corradi operation is a comparatively simple procedure. In the case reported, the firm fibrinous laminated clot undoubtedly prevented an early perforation.

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## THE CANCER PROBLEM

### A PLEA FOR A MORE RATIONAL CONSIDERATION OF THE CANCER PROBLEM

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The absolute cause of cancer continues an unsolved mystery. It has, through the years, baffled the careful scrutiny and research ingenuity of untold thousands of workers all over the civilized world. What the future holds in store for us or those who follow is indeed problematical.

Just so long as this condition prevails just that long will we be called upon to weigh the value of new theories and prove or disprove the claims of many of our scientific investigators. Just as long as fancy prevails over facts in the causative phase of the cancer problem, equally as long will we be bombarded by new methods of treatment, be they scientific or otherwise.

A casual consideration of this whole question reveals such an array of theories, both causative and curative as to muddle the stream of scientific thought and to flood medical literature with thousands of articles on the various phases of cancer, many of which express biased opinions or that are a menace to scientific thought and investigation.

It would appear, in the course of sound reasoning that there is prevalent a distinct mania or morbid desire, on the part of scientific investigators to receive credit for a great discovery in this line. This fact is shown by the thousands of articles that are now crowding our journals, which deal with many theories on the causation of cancer.

Nearly all investigators rush blindly into print with whatever data they can muster, evidently to forestall the possibility of some other worker receiving priority credit for a theory or a fact that may eventually be found to bear directly or indirectly upon the cause of cancer.

As all work is honorable so is all research data worthy of consideration but a little less display of printers' ink and a great deal more serious and rational consideration of facts would strike nearer the desired goal.

The human race has for centuries fought a losing game with the cancer problem. For several decades we have known that if cancer were attacked sufficiently early it could easily be erad-



icated. The medical profession have long been informed in efficient methods of treatment of early cancer or precancerous conditions and long for the opportunities to relieve suffering humanity. In the face of these facts and the apparent increase in the prevalence of cancer, why have we not carried on a more vigorous campaign to bring early cancer and potential cancer lesions under the care of competent physicians, which would result in a marked lowering of the mortality of this dreaded disease?

While we are forced to carry on without the knowledge of a definite etiology for cancer why not use the best methods at our present command and thus bring cancer and its potential forerunners under our care at an early date, and apply the proper means and the only known methods of decreasing the mortality of this terrible scourge?

When the etiologic factor is once established we may well bide our time until a definite remedy will be discovered, but during the long and tireless search let us be awake to our opportunities and search more diligently for all early cancers or precancerous conditions and proceed to annihilate the monster that will otherwise slowly eat away the threads of many precious lives. This is our job, therefore, let us consider it seriously while our colleagues in the laboratories continue their search for the cause of it all.

*Statistics:* The statistical side of the cancer problem is burdened with figures indicating most anything a reader may be searching for, but there are several carefully weighed collections of data that reveal approximately the actual condition that confronts us today.

It has been stated that statistics may be juggled so as to show anything desired by the juggler. I have no desire to burden your minds with figures, but we cannot grasp the significance of the problem without having before us some figures for comparison and as a stimulus for thought and attention.

It has long been contended that cancer is on the increase. Considered from a statistical standpoint that is apparently true, however, the more serious minded thinkers are inclined to view this increase with some skepticism and to at least attempt to show that it is more apparent than real.

There exists numerous factors that justify a doubtful attitude toward this phase of the cancer problem. Among those we find the following: First, the great advance in medical knowledge has lead to a more accurate diagnosis and thus many more cases of cancer are being reported. Second, improvement in the accumulation of all vital statistics has brought in no small number of reports that would previously have escaped notice. Third, the span of human life has been nearly doubled in the past century and thus a far greater number of people are now reaching the cancer age. Fourth, figures show that under 65 years of age there is no increase in the number of cancer deaths, while above sixty-five there is evidently an increase.

To illustrate more completely how statistics may misguide one's line of thought, it has been shown that between 1900 and 1915 the mortality from appendicitis increased 40 per cent. A fact that no right thinking medical man could reconcile with experience.

With the above facts before us we cannot readily justify the contention of an actual increase in cancer in any given hundred thousand people.

History records such interesting facts as these, during King Tut's time the average span of life was 18 years, during the Revolutionary war it had increased to 33 years, while during the late Civil war 45 years was the average and now we exist in the so-called Heinz age with a span of life averaging 57 years.

Our loss of life during the Great war was 76,433 up to July, 1919, while during the two year period of our participation in that great struggle there were 180,000 people died in the U. S. from cancer. This fact should impress us profoundly. Recent reports show that one death in eight in men between 55 and 70 is due to cancer and one in five in women between 45 and 65 is due to the same cause.

Cancer causes one out of every ten deaths after the age of 40, in this country; 95 per cent. of all deaths from cancer occur after 35 years of age. Ages from 35 to 45 three times as many women as men die of cancer and from 45 to 55 twice as many women as men die of cancer.

The average time that a person has cancer before death is approximately two years. Many cancer patients die of other causes before cancer would cause death. Many die of cancer that

is not diagnosed. It is now claimed that the deaths from cancer in this country will approximate 120,000 a year. Thus it is estimated that there are at least 300,000 cases of cancer in the U. S. at the present time.

If statistics mean anything they show that the death rate from cancer is appalling and is a blot on the annals of our present civilization, which no man can justify. And with 300,000 people suffering from cancer at any given time, the measure of human suffering both mental and physical is beyond conception.

That hope abides eternally in the human breast is too well illustrated by these facts, when we consider the general attitude of people toward cancer. The victim hopes that it is not true until he reaches the advanced stage without seeking information or relief. The reason for procrastination on the part of many cancer patients remains a psychological enigma.

We should devise more efficient means of bringing this situation before the laymen and seek a revival of interest on the part of the medical profession.

At this point we meet the pessimist who contends that it is human nature to be dilatory especially about one's health, and that it is no use trying to change human nature, and get Mr. Average Person to think seriously about his health and to seek aid and relief from all physical abnormalities and do it early. With him I have no quarrel, but the optimist will say that while human nature is a fixed entity and is not subject to change yet the average human is subject to education. Thus let us awaken to our opportunities for spreading the gospel of periodic health examinations and preservation of a sound body.

With these propositions before us let us study the problem further. We are not ignorant of the fact that a tremendous amount of work has been done in the past and that a great army of people are now devoting their entire time and energies seeking for the cause of cancer. On the other hand, we should be awake to the fact that insufficient effort is being put forth to establish an early diagnosis and quick eradication of the discovered lesions. You and I may not, and probably never can assist in the discovery of the absolute cause of cancer. However, we may all do a great work in promoting

early recognition and quick eradication of this terrible human scourge. On this latter proposition is based the control of the ever increasing mortality of cancer, at least until such a time as the definite causative factor is established. The laymen in nearly all walks of life are now interested in one way or another in the promotion and benefits of periodic health examinations. Organized Medicine is devoting much time and money in carrying out a systematic program along this line. It is from this source, especially, that the solution of the cancer problem finds its greatest aid. Thus it behooves every medical man to keep his ear to the ground and his eyes on the parade, lest the rumblings of increased knowledge, and the spectacle of the health seeking crowd go by us unnoticed. All such signs should stimulate our interest in every source of information and methods of practice and enable us to make more complete, thorough and exhaustive examinations of every patient that comes under our observation. We may thereby discover every suspicious lesion, both superficial and deep, see that an early positive diagnosis is made and the proper remedy applied.

At this point please note that I believe a safe and sane attitude toward all tangible pathology is, that all tumor masses of whatever nature, all superficial or deep seated lesions should be considered malignant until they are proven to be benign. Now I need not dwell long on this point to have you understand that many pathological conditions are so well recognized that carcinoma may be ruled out immediately, however, in many simple and harmless appearing conditions, that do not respond to treatment or remain stationary, lies the potential elements of later carcinoma. To this end I need only mention warts, moles, irritated scars and sebaceous cysts, eroded crevices, gastric ulcers, fissured lips, untreated hemorrhoids, anal fissures, pruritus ani, fissured nipples, benign tumors of the breast, uterus, etc.

Let us, then, be ever alert and suspicious of any lesion which does not show a definite early tendency to recovery or, if it be a benign tumor, to remain stationary. What more justifiable advice can we give any patient than to urge or insist on immediate removal or eradication of all abnormal processes that carry a possibility of later malignancy.

Relatively a small percentage of patients seek



the advice of the specialist primarily, therefore, the general practitioner or family physician is vested with the responsibility of making an early diagnosis of cancer and giving proper advice concerning the best course to follow.

Competency, careful diagnosis, and immediate and intelligent action are the secret of control. Disaster will follow in the wake of slipshod diagnostic methods and delayed action in all cases of carcinoma, while prompt and radical action in these cases is just as essential to success, as in acute appendicitis or gall bladder suppuration. The slow painless progress of early carcinoma or precarcinomatous condition is apt to lull our enthusiasm and permit the patient to approach the danger line so closely that cure is beyond the scope of human possibilities.

Never miss an opportunity to impress upon patients and personal friends the serious aspects of all new growths and precancerous lesions regardless of being accused of ulterior motives.

We are living in a great era; efficiency and speed are the cry of the age; modern science and education demand expert opinions in all lines of human endeavor and in the medical world expert diagnosis only is acceptable. How essential is this in dealing with the cancer problem and herein lies the medical fraternity's greatest service to humanity.

None of us are ignorant of the importance of this subject nor of the early manifestations of many types of cancer but we are sore in need of a revival of interest that will force upon us intelligent and immediate action, remembering that in the early stages cancer is cured by surgery and later x-ray and radium are valuable adjuncts. No one man's opinion is sufficient in doubtful cases; a combination of sound surgical and medical judgment will solve most of these problems effectively.

Conclusions or high points in the cancer problem:

1. Cancer is always curable if attacked early enough (as in precancerous stage) and frequently when thought to be hopeless.

2. Proper education first of the medical profession and secondly the laymen will be a great step in advance.

3. Careless and indefinite diagnostic methods on the part of any physician are inexcusable.

4. Expert or competent consultation in many cases should be the rule.

5. Cancer mortality will be lowered only by intelligent action on the part of the medical profession.

6. Let us make proper use of our God given powers, revive our conscience, be not ashamed to seek the best advice and cancer mortality will soon be lessened.

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## PERNICIOUS ANEMIA IN THE NEGRO.\*

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Writers on pernicious anemia have paid little attention to its race incidence. A recent autopsy upon a negress dead of pernicious anemia caused comment upon the rareness of the disease in the black race. Schilling<sup>1</sup> says that pernicious anemia is uncommon in the tropics. Willson and Evans<sup>2</sup> analyzed 111 cases of pernicious anemia treated in Johns Hopkins Hospital. Only eight of the 111 patients were colored. Further, these eight were mulattoes. Seven of the eight had very complete remissions in the hospital. These authors are impressed with the mildness of the condition in colored patients. They suggest that the small number of cases may in some measure be explained by the smaller number of beds allotted to negroes. French, in Allbutt and Rolleston's "System," says that race plays no part in the etiology of pernicious anemia.

There were 256 patients with pernicious anemia in the Cook County Hospital from January, 1921, to August, 1926. Of these 256 patients, eight were colored. Whether these were mulattoes or full-blooded negroes was not determined. The age of these patients ranged from 25 to 62 years. Three were males. Five were females. The average duration of symptoms previous to admission was two weeks to seven years.

Five of the patients had had symptoms for more than one year; the remaining three less than two months. The disease could be classed

\*From the Medical Services of Cook County Hospital, Chicago.

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2. Willson and Evans: "An Analysis of the Clinical Histories of the Pernicious Anemia Patients in Johns Hopkins Hospital from 1918-1922." Bull. Johns Hopkins Hosp., 1924, 35, p. 38.

as severe in all the cases. Five of the patients died. The remaining three were discharged unimproved after long periods. The diagnosis was substantiated by autopsy in three instances.

Of six patients with the diagnosis of aplastic anemia, one was a negro. The diagnosis was confirmed at autopsy.

Approximately thirty-three per cent. of the Cook County Hospital patients are colored. Of the patients with pernicious anemia only three per cent. have been colored. Our statistics agree with those of the Johns Hopkins Hospital in showing pernicious anemia uncommon in negroes. As contrasted with the Baltimore experience all our patients were severely ill. None improved and over half of the patients died.

Coincidentally there was noted an unusually large number of Scandinavians and Poles among the pernicious anemia patients. Perhaps the relative scarcity of tæniasis among the tropical races explains the low incidence of pernicious anemia in the negro.

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## ANESTHESIA AS A SPECIALTY

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Practically all the progress of science to date is due to efforts of men who have taken up a certain branch or kind of work or profession, and have given much or all of their time to their subject, this effort being stimulated by one or two sources, the intense interest or love for the individual kind of work or science or from a mercenary point of view, or both. Specialists exist in every station of life, from the humble pea-nut roaster to the modern scientist. Our large factories and corporations are composed of specialists upon whose skill and perfection of their specialty depends the success of the organization as a whole. In other words the specialist is one of the necessary factors in successful team work.

Anesthesia dates back to the time of Adam, but it was not until the years 1842 and 1845 that inhalation anesthesia was beginning to come into its own. Eight operations were performed between 1842 and 1845 where ether was administered successfully by Dr. Crawford W. Long of Georgia. At this time Dr. Long did not make

his discovery known, nor did he until Dr. William T. G. Morton administered ether in the Massachusetts General Hospital, successfully, before an audience Oct. 16, 1846, four years after the first case of Dr. Long's. Dr. Horace Wells, a dentist, was successfully anesthetized with nitrous oxide for the extraction of a tooth, in 1844. Drs. Wells and Morton devoted all of their time and experiments up to the time of their deaths studying anesthesia and anesthetic agents.

Chloroform was used for the first time, successfully, Dec. 19, 1846. The credit for chloroform rests with Sir James Y. Simpson of England.

Every step of the progress of anesthesia has been met by severe opposition, not only from the medical profession but from the clergy and laymen as well, even as scientific progress is fought today.

Ethylene was recognized and named as early as 1845 with a few experiments recorded, but it was not until 1918 when Drs. Luckhardt and Thompson of Chicago began experiments to ascertain its toxic effects upon animals, after their study of its effects upon plant life. Unfortunately, this work was discontinued during the war but was taken up again in 1922 by Dr. Luckhardt and assisted by Dr. Carter of the University of Chicago. April 27, 1923, they reported one hundred and six cases operated upon with ethylene as an anesthetic agent, in the Presbyterian Hospital, Chicago.

We feel grateful to Hewitt of England, and Gwathmey, Guedel, MacMechan, McKesson and others of the United States who have so generously given to us the results of their work and experiments.

In 1916, the American Year Book of Anesthesia and Analgesia was published by the Surgery Publishing Company of New York, containing the results of research work of the members of the National Anesthesia Research Society, the New York Society of Anesthetists, the American Association of Anesthetists and others, in which they took up not only general anesthesia, but spinal, local and colonic, the Editor being Dr. F. H. MacMechan of Avon Lake, Ohio.

America today has six well organized, active anesthetic societies, namely the Pacific Coast, Midwest, Southern, Eastern, National and Can-



adian. The sole object of these societies is to further the study of the physio-chemical theory of and physiology of anesthesia, and the practical application of the different anesthetic agents and to publish the results. These societies, it is surprising to know, have been met by stern opposition from the American Medical Association, American College of Surgeons and part of the surgical and medical world. Whether this is because of the normal tendency to retard progress on account of ignorance of the subject in question, prejudice, jealousy, or all three, we do not know. But I do know that the introduction of nitrous oxide and oxygen anesthesia in my own community was opposed bitterly by some of our most eminent and learned surgeons and medical men, who today are using this anesthetic in their practice and are the staunchest supporters of its administration. The fact that ether has a seemingly wide scope of safety in its administration, with a false impression that it could be administered by anyone, has made it difficult to convert the surgeon to any other form of anesthesia. They have been too willing to let well enough alone, yet too quick to condemn all else.

The anesthetist of today knows the effects of the different anesthetic agents, their dosage, method of application, dangers and safety zones. It is not a case of simply soak your patient, but instead it is an art of carrying the patient to the anesthetic depth necessary for the convenience of the surgeon, and the safety of the patient, not only while on the table but post-operative as well.

It is some of the unusual types of cases which require special knowledge and skill that gives to the surgeon a sense of security and relief from responsibility if he has an anesthetist who is dependable and can give this trained assistance during the operation. Each patient is a law unto himself. Therefore, the epileptics, anemics, diabetics, alcoholics, drug addicts and certain types of cardiac lesions require an anesthetic best adapted to meet with the conditions presented by the individual. He can direct medication during the operation, if needed, without taking the mind of the surgeon off his work. He should accompany the patient to the bed and at the suggestion of the surgeon, direct the immediate care and see that the nurse carries out his orders correctly. Blood pressure should be taken before

and at intervals during the operation in cases of known or suspected high blood pressure, nephritis, arterio-sclerosis and in cases subjected to trauma, excessive loss of blood and patients of low resistance. He should be the judge of the anesthetic agent used, as in the above mentioned conditions it is very important that the blood pressure does not fluctuate to an alarming degree and that the pulse pressure remains in proper ratio. The systolic, diastolic and pulse pressure readings show the condition of the patient and gives a warning of an oncoming shock. Measures to forestall or ameliorate same can be taken early, with often very satisfactory results, and is a keynote to the surgeon.

The essentials for success in anesthesia are ability, equipment and personality. The anesthetist must be able to convince the patient that he knows his part and to establish that feeling of safety and confidence with his patient. This confidence established within the lay mind will assist the surgeon to convince his patients that they will receive only the most skilful service, and will greatly allay the fear that the average patient has for the anesthetic. In fact, many cases wait until it is too late on account of the dread of the anesthetic. This dread and fear alone make up one of the important factors predisposing to shock.

Ability depends upon the adequate education, natural endowments and aptitude and love for the specialty, and conscientious hard work. No anesthetist with the pride of ability or the desire for exceptional service will handicap success by failing to provide all of the latest and best equipment, regardless of cost, the same as the laboratory clinician and the surgeon. It should be a question of service, not cost. The fee he may expect as the result of such service should be in keeping with the services rendered and this should be encouraged and assisted by the surgeon. Cheap services are the death blow to all ambitions and the cause of too many failures in a surgical team where the surgeon loses sight of the fact that this encouragement causes the anesthetist to work harder to prepare himself for better work, and a devotion of more time to his specialty, making his services relatively more valuable to the surgeon, to the patient, to the hospital and to the public.

## THE PHYSIOLOGICAL EFFECTS OF CERTAIN TOXIC SUBSTANCES OF GASTRO-INTESTINAL ORIGIN.

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MARION, ILL.

There is a wealth of literature concerning the role of the gastro-intestinal tract as a focus of infection and as an absorbing surface for toxins. Knowing as we do the damage that may result from small foci, and knowing that the absorption from the gastro-intestinal tract is not proportional, it is difficult to estimate its exact value to health.

There are at least four factors to consider as to the way in which damage might be produced:

1. The amount of toxin.
2. The detoxication capacity of the body tissues and organs.
3. Local tissue reaction.
4. Rate of elimination of the end products of detoxication.

The amount of toxin is too small to estimate by present laboratory methods or it comes of a variety of substances which are difficult to identify.

The detoxication capacity of the body tissues and organs exceeds many times the usual needs for detoxication and it is this reserve that allows one to recover from intercurrent infections. This capacity is similar to the unusually large cardiac reserve that allows a normal, healthy individual to undergo extreme physical strain. Local tissue reaction is in general physiological and may or may not leave anatomical evidence of its existence but it does produce very definite physical signs.

Rate of elimination may be measured in various ways depending upon the chemical nature of the end product. This paper deals with the last two factors mentioned and the study of the rate of elimination is limited to that of urea.

Absorption phenomena of gastro-intestinal origin may be associated with common duct obstruction with or without jaundice, duodenitis, cholangitis, pancreatitis, appendicitis, sprue, pellagra, intestinal parasites, typhoid and paratyphoid infections, dysentery due to organisms of the Gaertner or Flexner type, botulism, ameba, and the flagellates. Such intoxications may be confused with poisoning by coal tar products, chloroform, phosphorus, arsenic, mushrooms, ptomaines, solamin from potato sprouts, and the

various pollen allergies. Also an ergotoxin like substance or substances stimulating unstriated muscle fibers is probably produced by molds growing in the intestinal lumen.

Certain chemicals are derived from protein decomposition. If the deamidization occurs first in the tearing down of the amino acids, phenol, cresol, indole and skatol, which are not highly toxic, are formed. If, however, the carboxyl group is split off before the ammonia the ptomaines, as ethylamine, phenylethylamine and histamine are formed, some of which are highly toxic. Certain of these substances are also produced in the tissues during metabolism; histamine and epinephrine, two chemically like substances but physiologically opposites are examples.

Hashimoto has recently shown that histamine may cause complete or partial heart block<sup>1</sup> and respiratory difficulty presumably due to constriction of the bronchioles and pulmonary vessels and a group of general symptoms resembling those of intestinal obstruction<sup>2</sup> including lowered blood pressure and temperature, stupor or convulsions, retching or vomiting and temesmus with discharge of blood tinged mucus.

Ergotoxin, an amine obtained from ergot and from certain of the products of histidine, has an action antagonistic to that of epinephrine. It paralyzes the vasoconstrictor fibers.

Case No. 1510 R. D. female, aged 8 years, who at the age of 5 had had an attack of fever for several weeks, but which was said not to be typhoid; continued to have attacks of severe nausea and vomiting accompanied by extreme nervousness, flushed cheeks and air hunger similar to the signs and symptoms of diabetic coma. The tongue was bright red and dry. Between attacks she seemed healthy except for a muddy complexion and a bilateral chronic bronchitis. The temperature was normal during and between attacks. The attacks were about 6 weeks apart at first but the interval had shortened to two weeks. During the attacks the pulse was very rapid, the skin dry and rough and the face crimson. The blood and urine were normal. The blood pressure was 40 systolic. The blood urea was normal at onset but rose to about 200 gm.-100 c.c. after the severe vomiting, which was frequent and was relieved by exhaustion of the patient. The stool examination revealed much pus and mucus, and many red blood cells. The urine was negative. Vomitus

1. Hirotoshi Hashimoto: Transient change in the auriculo-ventricular conduction following the injection of histamine. *Archives of Internal Medicine*, May, 1925, XXXV, 609-625.

2. Hirotoshi Hashimoto: Blood chemistry in acute histamine intoxication. *J. Phor. & Exp. Ther.*, XXV, No. 5, June, 1925.



contained bile, pus, blood and mucus. Fluoroscopic and x-ray examination of the stomach and colon were negative. The urine was negative throughout.

Colonic antisepsis was continued one month during which the patient received a diet consisting of 150 gm. carbohydrate, 50 gm. protein, and 70 gm. fat in the form of milk, eggs and cereals. This was 40 per cent above her caloric requirement. A teaspoonful of saturated magnesium sulphate solution one-half hour before meals was given for three months. She has had no symptoms since January, 1925, and has been on a general diet two and one-half months.

These symptoms are identical with the symptoms produced by histamine poisoning. It would seem that overeating was the chief factor in this case in regard to treatment. She ate ravenously and the desire for food increased until an attack of vomiting began, she could take no more nourishment then for a short period when the appetite would just as suddenly return and the progressive increase in eating would continue to the next attack. There was no evidence, nor family history, of functional nervous disease.

A very common type of intoxication is illustrated by the following two cases:

Case No. 1311, Mrs. H. R., aged 20 years, was seen June 2, 1924, her complaints were irregular menstruation, nervousness, spitting up blood and dermatitis of the backs of the hands and wrists of two years standing. The dermatitis has been recurrent since age 5 years. In the family history there had been two still births and one brother died of Hodgkin's disease.

Menstruation had begun at 13 years. It was regular, 4 weeks apart, scant and lasted about one week. Leucorrhea had been constantly present since puberty. Three years before she had had several attacks of pain and tenderness and a palpable mass in the right lower quadrant. The attacks were accompanied by fever and vomiting. An operation was performed at that time and a small atrophic, innocent appendix removed.

The first 3 or 4 inches of the cecum was of a very dark, muddy red color with thick opaque spots and other very thin transparent spots through which the contents of the cecum could be seen. The cecum was very firmly bound down in its fossa but there was no adhesion to surrounding viscera. The abdomen was closed without drainage and to the surgeon's surprise the patient made an uneventful postoperative recovery. However, there was no relief from symptoms which had been present to a greater or less extent to the time of examination.

The appetite and digestion were poor and there was much gas and belching with frequent sour stomach. There was dyspnea and palpitation on exertion or excitement. There was no urinary symptom except nocturia. The patient was very nervous, had frequent vertical headaches, without nausea, lasting a week or more and was dizzy on bending over. She slept well at night.

Physical examination revealed a young woman in good general condition, height 5 feet 1 inch, weight 98, pulse 78, temp. 99. The dorsal surfaces of both hands were covered with pustules and crusts. The head, mouth, eyes, nose, throat, ears, thyroid, heart and lungs were negative. There was a general abdominal spasticity with tenderness over the ascending and sigmoid portions of the colon. There was tenderness to percussion in the right lumbar region. Liver, spleen and kidneys were not palpable. There was no pathology in the pelvis and rectum. The genitals, glands and reflexes were normal. Sigmoidoscopy revealed dark red eroded surface extending about two inches above the recto-sigmoid junction.

Blood examination revealed Hb. 70; W. B. C., 6400; R. B. C., 4,400,000. Blood pressure was 130 systolic and 80 diastolic. Wassermann test was repeatedly negative. The stool was very offensive and contained blood, pus and mucus. Urinalysis revealed S. G.-1020, a trace of albumin and a moderate amount of pus. It was otherwise negative. Stereoscopic x-ray of the chest revealed no pathology. X-ray of kidney, ureter and bladder were also negative.

Treatment consisted of twice weekly colonic instillations of a colloidal silver solution. In three weeks the skin lesions disappeared and have not reappeared.

This patient moved to Chicago and in October spit up as much as a teacup of blood. This reoccurred in January, 1925, and in June, 1925. During this time there was fever both A. M. and P. M. from 99F to 102F. The lowest weight was 88 in April, 1925. There was no positive evidence of tuberculosis. She was sent to a T. B. hospital where she was kept in bed and felt worse and signed herself out after three weeks. All winter she was troubled with poor appetite, bad taste and breath, fever, slight annoying cough and extreme nervousness. She returned to me and treatment was resumed on July 27, 1925. At this time she complained of the same symptoms except that there was no fever and she had gained some weight. Blood examination revealed Hb., 85; W. B. C., 9260; R. B. C., 4,632,000 and urine examination revealed an excess of indican and a small number of pus cells. There was soreness over the cecum and hepatic flexure which was entirely absent after three weeks' treatment. The nervousness greatly improved and the patient's appearance was that of excellent health.

Case No. 1866, Mrs. G. L. B., whose father and one son died with tuberculosis, complained of recurrent backache and eczema since age 16. Eczema had been present constantly for the past two years during which time the patient had used all various skin lotions and diets, including protein free diets, prescribed by skin specialists with no resulting influence on the eruption.

There had been constipation for some years increasing in severity. There had been more or less

digestive trouble for a long time. She had had a hemorrhoid operation 30 years ago, repair of perineum 26 years ago, gall stone operation 15 years ago, and an operation to break adhesions 13 years ago. There were no digestive symptoms at the time of examination. The urine was irritating.

Physical examination revealed a woman weighing 181 lbs., with good nutrition. Pulse rate was 84, blood pressure was 150 systolic and 90 diastolic. Head, including ears, nose and throat, was negative. The teeth were absent. Eyes were negative except for slight arcus. The neck and chest, including heart and lungs, were negative except large patches of eczema on the right cervical, axillary and pectoral regions. There were small patches of eczema generalized.

Abdominal examination revealed the scars of the previous operations. No organs were palpable and there was no rigidity nor tenderness.

Rectal examination revealed a red eroded lower rectum with signs of irritation higher up but without ulcers.

The Wassermann was negative. The blood urea was 109. Blood examination revealed Hb., 90; W. B. C., 8000; R. B. C., 4,584,000. Urine examination revealed S. G., 1028; Alb., 0; sugar, 0; indican dark blue, and a small number of pus cells.

The patient was given a protein free, non-irritation diet, with small doses of bismuth, magnesia and soda by mouth. Also, enemas of colloidal silver every other day over a period of 14 days, at the end of which time the rash and backache had completely disappeared. The blood urea had dropped to normal.

The high non-protein nitrogen in this case was not the cause of the eczema because she had recurrent attacks of eczema all her life and in addition to this she had previously been on a very low protein diet for several months. Neither was the eczema due to over indulgence in any other kind of food, nor was there any evidence of disturbance of liver function, kidney disease, pancreatic disease or disease of any other digestive organ except the colon. The symptoms disappeared promptly when free drainage and cleanliness were established in the colon. These cases are almost identical. The toxin was pressor in action and was due to activity in the colon other than food decomposition. It was formed in the intestine or in the body tissues by some other substance which was in turn formed in the intestine. That the action was direct is indicated by immediate response to colonic antiseptics.

These cases are in accord with the fact that the glossitis in pernicious anemia responds readily to colonic flushing. That disturbance of the gastrointestinal tract may be due to some factor in the digestion of protein or sugar in the diet is indicated by the observation of McCarrison<sup>3</sup> that such

conditions are seldom seen in India where there are little of these substances in the diet.<sup>4</sup> Boland calls attention to the same condition in those parts of the southern U. S. where the diet contains very little meat and sugar.

That disturbance in the digestion of these substances may cause tissue reaction has been shown by Opie.<sup>5</sup> Although these or similar substances are responsible for the production of the toxic symptoms seen daily in clinical observation few facts in regard to them have been clearly demonstrated. Symptoms identical with those of exophthalmic goiter have been produced by Hyman,<sup>6</sup> Lieb and Kessel by injecting substances stimulating to the autonomic nervous system.

The reaction of the autonomic nervous system is influenced by tissue reaction and therefore there are as many different symptom complexes as there are individuals; the reaction to a given stimulus depending upon the capacity of the nervous system to react. This might be compared to the variations in cardiac capacity in different healthy individuals so well illustrated by the effort syndrome.

The independence of the autonomic nervous system and the endocrine glands to perform their functions has been shown by Lieb and Hyman.<sup>7</sup> It is known that at least one endocrine substance, adrenalin, is produced in tissues outside of the adrenal gland. Both pressor and depressor substances are absorbed from the intestine. The physiological result depends upon the amount of each and the ability of the detoxicating factors to destroy them before symptoms are produced. The effect of adrenalin in asthma and of iodine in asthma and in exophthalmic goiter may indicate that some of the internal secretions may be detoxication agents and function normally in protecting the autonomic nervous system from the action of toxins. That such toxins may be of gastro-intestinal origin is indicated by the fact long known that thorough colonic flushing will frequently be accompanied by sudden and complete remission of symptoms known as autonomic im-balance and many of the so-called allergic phenomena.

4. Frank Boland: Observation on the Gall Bladder. Transactions Interstate Postgraduate Assembly, 1925.

5. E. T. Opie: "Inflammatory reaction of the Immune Animal to Antigen." Jour. Immunology, July 24, 1924.

6. C. C. Lieb, H. T. Hyman and Leo Kessel: A study of exophthalmic goiter and the involuntary nervous system. J. A. M. A., 79, 1099 (Sept. 30), 1922.

7. Lieb and Hyman: Am. J. Physiol., 63:83 (Dec.), 1922.

3. McCarrison: Faulty Food. J. A. M. A., Vol. 78, No. 1, 1922.



## COMPLICATIONS AND SEQUELAE OF OPERATIONS FOR APPENDICITIS

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The complications in the following outline are grouped together to show their method of occurring. Complications or sequelae of operations for appendicitis upon a mechanical basis:

Fecal Fistulae. (If persistent usually due to tuberculosis).

Adhesions of bowel. Partial or complete obstruction.

Hernia, Ventral.

Infections: Peritonitis, local or general.

Abscesses:

1. Local at stump of appendix.
2. In pelvis.
3. Left sided; rare, mostly in children.
4. Perinephritic—usually due to posterior cellulitis.
5. Subphrenic Abscess:
  - (a) Due to direct extension.
  - (b) Lymphatic route.
  - (c) Posterior Cellulitis.

Lymphatics:

Lymphangitis. Retro-peritoneal glands or abscesses.

Blood Vessels:

1. Thrombosis of:
  - (a) Mesenteric vein or artery with gangrene of bowel; local or general.
  - (b) Iliacs or Femoral—usually right sided.
2. Embolism of lungs or other parts from broken thrombi.
3. Infected Thrombosis of veins.
  - (a) Multiple liver abscess. Occurrences, 0.1 to 0.4 per cent. of cases with death in 54 per cent. of cases.
  - (b) Passage of infected emboli to lungs, brain or other parts with abscess formation.
4. Bacteremia with
  - (a) Pyema.
  - (b) Endocarditis.
  - (c) Parotid gland infection.
  - (d) Empyema.

Genito Urinary:

Hematuria. Right sided, usually clearing in a few days.

Unclassified:

Ileus.

Hematemesis.

Meckel's Diverticulum. Removing appendix and leaving infected diverticulum.

Recurrence of symptoms of colitis, dyspepsia.  
4753 Broadway.

## RADIATION THERAPY IN THE TREATMENT OF INOPERABLE CARCINOMA\*

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About 90,000 people die annually in the United States from cancer, hence about an equal number of people are now in the incipient stage of the disease and curable if they would seek medical aid now and be treated correctly. A large part of the cancer problem would be solved if the laity could be induced to apply early for diagnosis and treatment. Up to the present time at least this has been impossible. At least 50 per cent of the above 90,000 will apply for aid after the osteopath, chiropractor, christian scientist and whatnot have reached the bottom of the purse and given it up as a bad job well done. We have no fight with the surgeon who has done his best to eradicate the disease by means of the knife and has found to his sorrow that the lesion has invaded parts he cannot remove, nor with him who removes primary lesions whenever they seem to be distinctly local or when operation will result in a palliation of the very distressing symptoms many of these patients suffer. Our opinion of the methods used by quacks and some of the so-called sciences will have to be reserved, our vocabulary is not large nor strong enough.

They come to us in hopeless conditions. Practically all of the lesions have invaded tissues and parts that cannot be surgically removed and many times so situated that they are very hard to reach by any means at our disposal. In many the lesion has progressed to such an extent that the natural resistance to the invasion of such a lesion is negligible. They are undernourished and worn out by pain and worry.

What can we offer such patients? For those

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who are emaciated and whose resistance is worn down to a minimum, nothing. These patients will ordinarily not last long enough to obtain beneficial results even if our methods could help a lesion so far advanced. For those who have a carcinoma so far advanced that surgical removal is impossible but who are not already cachectic and appear to have at least a moderate portion of the normal resistance we feel that we have a great deal to offer.

First, statistics show that about 15 per cent of these cases become operable under proper radiation therapy. The tumor is often so reduced in size with disappearance of the lesion in the inaccessible tissues that complete eradication of the lesion by surgical methods is possible. Even if nothing more could be hoped for, this one chance in seven should be enough to make the treatment of the cases with radiation worth while.

Second, among those lesions where the lesion cannot be made operable 50 per cent of the lesions are so retarded in growth and in effect upon the patient that life is lengthened from six months to two years in comparative comfort.

Third, radiation will relieve the pain in about 70 per cent of carcinoma patients. This may even hold true for the metastasis that are almost sure to develop as I wish to illustrate by one case later.

Fourth, radiation therapy will heal over many of the large ulcerating masses, eliminating the most disagreeable odor and discharge which makes some of these patients come to hate themselves. These things we can offer to a very large majority of our cases. It is impossible to select those who will receive benefits from the more unfortunate, as we have no measure of the resistance possessed nor sufficient knowledge of the pathology we are treating. Statistics are piling up from very reliable sources, however, that are going to be of inestimable value in the prognosis and proper selection of cases for radiation therapy.

Time forbids a detailed description of the methods and technique used. I can only give you a few illustrations of the results obtained.

Case 1. Mrs. W. The patient was a well-nourished female about 60 years of age. Physical examination revealed a mass the size of an orange in the upper and outer quadrant of the right breast. There was

definite discoloration of the overlying skin which appeared about to ulcerate. The axillary, super and infra-clavicular regions contained glands the size of hickory nuts. The patient said that she had noticed a lump in that breast for the past year, but it had been growing very rapidly in the last two or three months, and that she now has so much pain that it prevents sleep or rest.

Mrs. W. was referred to us April 1 of this year in the above condition. X-ray of the chest shows no involvement of the lungs, pleura or mediastinum. X-ray therapy was started at once, using large portals of entry and covering all affected parts. In all she has received 60 treatments of 15 minutes each in the last eight months. At the present time the primary tumor is about one-third its original size. The overlying skin has returned to a nearly normal appearance. No ulceration has taken place. The enlarged regional glands are greatly reduced in size. The patient has gained weight, and last, but not least, she suffers practically no pain.

Case 2. Pacholski, aged 5 years. A well-nourished boy presenting a large tumor on the left side of the mandible and apparently attached to it. The overlying skin appeared to be about to ulcerate. The lower teeth had been removed and there was a large ulcerating and discharging mass extending into the mouth. The regional glands were not palpable. X-ray films showed a typical malignant destruction of over one-half of the left side of the mandible, including the entire ramus.

This patient was referred for x-ray therapy, July 14, 1925, sixteen months ago. He has received in all, four series, totaling four and one-half hours over each of three areas, and is still under treatment. By scattering the treatments over a long period of time we have been able to give this enormous amount of radiation without any appreciable effect upon the overlying skin, except that at this time there is no evidence of any tendency for the tumor to ulcerate. The tumor has reduced about one-third in size. The mass in the mouth has largely disappeared and there is no discharge, pain or other symptoms. X-ray shows no extension of the process, but no regeneration of the bone has taken place. No metastases have as yet appeared. The boy is slightly undersize, but is well nourished and continues to grow.

Case 3. A well-nourished male of about 50 years of age, presenting a large proliferating, ulcerating and hemorrhaging mass in the left popliteal space. Ulcer was about six centimeters in diameter with granulating tissue protruding two centimeters above the skin surface, from which hemorrhage could not be stopped. The tumor filled the entire popliteal space. This was a recurrence, the patient having been operated on eight months previously. Regional lymph glands were not enlarged. X-ray therapy was instituted with cessation of hemorrhage in less than a week. The proliferating mass of granulation tissue gradually disappeared until below the skin surface at the end of the month. The large ulcer reduced in size until at the end of two



months it was about one by two centimeters in diameter. The tumor in the popliteal space at this time was about the size of a walnut. At the end of three months he returned with a slight increase in the size of the tumor and with evidence of more granulation tissue in the base of the ulcer. Another series was given, as yet without appreciable results. This patient, however, can receive a great deal more radiation retarding the growth and keeping him comfortable for quite a period of time. He is having no definite symptoms at the present time.

Case 4. A well-nourished male, aged 58, presenting himself with a large ulcerating epithelioma involving the entire posterior surface of the pinna of the ear and extending three-fourths inch on to the scalp behind the ear. Regional lymph glands not palpable. The epithelioma was of about one and one-half year's duration during which time all kinds of salves and ointments had been applied. X-ray treatment was started August 3, 1926. He received a total of 196 minutes over two areas. Pain and discharge from the ulcer very rapidly disappeared, and by the end of four weeks definite regeneration of normal tissue could be seen around the margins of the ulcer. When examined, October 5, normal skin covered practically the entire area with no evidence of ulcer, but there was slight scaliness about one centimeter in diameter in two areas. There is no evidence at this time of any malignant tissue in this area or in the regional glands.

Case 5. Mrs. Stevens, operated on eight years ago for carcinoma of the breast. Axillary and sub-clavicular glands removed along with the breast. Three years ago patient was referred to us with a large malignant ulceration about three inches in diameter in the old scar. This was giving a great deal of pain and had a foul-smelling discharge. The patient was treated with x-ray at that time with complete healing over the ulcer, but the patient did not return for sufficient treatment and again returned in September, 1923, at which time the ulcer was practically the same size as the original ulcer. She received several treatments at this time, but decided to go to California where she received x-ray treatment with little or no change in the size of ulcer; however, there was comparatively little discharge. She returned in September, 1926, for further treatment. At this time she was having no pain, discharge or definite symptoms from the original lesion. However, she said that about two months previously she noticed that she could not see to part her hair and that the side of her face seemed to be swollen. She complained of no headache, pain or other symptoms. Physical examination shows a definite exophthalmos involving the left eye with a boggy feeling to the tissues over the maxillary region. There was also a large depression involving the entire left parietal bone, left side of the frontal and occipital bones and the squamous portion of the left temporal. There was no tenderness over this area, but small nodules could be palpated beneath the skin. X-ray plate shows complete destruction of the skull in the regions mentioned. This is a very large, painless metastasis.

Case 6. Mrs. L. A well-nourished female, 49 years of age, referred to us with continuous vaginal hemorrhage, loss of weight and appetite and so much pain that sleep was becoming practically impossible. Vaginal examination revealed a large proliferating, ulcerating tumor involving the entire vaginal portion of the cervix and extending one inch down the posterior vaginal wall. The uterus was frozen. The patient received two applications of radium three weeks apart, receiving in all 2400 milligram hours. In the meantime she also received heavy x-ray therapy delivering to the uterus and surrounding tissues about 120 per cent of the skin erythema dose. The pain disappeared and appetite returned within two weeks following the first application of radium and the patient began to gain weight. At the end of four months no palpable evidence of the tumor could be made out. There were no ulcerations in the vagina or on the cervix, although the cervix appeared irregular, as the destroyed tissue could not be replaced. The uterus was movable. Eight months after the institution of treatment a complete panhysterectomy was done. Considerable fibrosis, but no evidence of malignancy was found. Ten months after operation the patient was clinically well. Perhaps this will be the one in seven of the inoperable carcinomata which become operable under x-ray therapy and will remain well.

Radiation is not a specific for malignancy. It will not cure inoperable carcinoma, but it will give the above results in a large number of cases which is more than any other form of palliative treatment has accomplished.

## MENTAL DEFECTIVES IN RELATION TO CONGENITAL AND ACQUIRED SYPHILIS\*

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Studies in anthropology have proven that the presence or absence of certain physical peculiarities or characteristics in the progenitor is certain to be manifested in the progeny in one or another generation.

Syphilis, as a factor in the etiology of mental defectives, holds an important place. Some authorities find it comparatively rare, probably owing to natural reticence, and for this reason information under this head is not readily obtainable.

Before the advent of the Wassermann reaction the diagnosis of syphilis in the mentally deficient was rare, observation, based on clinical evidence, being under one per cent. Many of the

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feeble-minded who presented no visible manifestations of syphilis, with the diagnostic aid of the Wassermann test presented a positive blood serum.

These methods brought about an increase in the number of mental defectives affected with syphilis, and caused many authorities to consider syphilis as a major causative factor in mental deficiency.

Early writers supported this assumption: in Germany, "Gordon" reported sixteen per cent of positive reactions among the feeble-minded; in England, "Fraser" found forty-eight per cent and in the United States, "Atwood" found fourteen per cent.

The high mortality rate in infancy, and the great number of premature deaths among the offspring of syphilitic parents, gave investigators reason to believe that the large number of cases among mental defectives were simply the survivors of a still larger group—a group that never reached an age at which they could be considered defectives. It appeared logical that congenital syphilis should manifest itself in its points of predilection and produce a defective brain, knowing as we do the susceptibility of the Spirochete for nerve structure.

The uniting of the facts gave a decided support to the theory of syphilitic causation in mental degeneracy.

Armstrong, in 1914, stated that "inherited syphilis played a much larger part in the production of mental degeneracy than was supposed." Dean says: "the result is, by, in some way, injuring the vitality of the parent or offspring. Gordon of Germany goes a step further and states that "individuals in whom syphilis is unrecognized and untreated must be regarded as potential parents of mentally deficient children."

These early ideas have been brought down to the present day. In 1921 Hunt wrote "mild and severe imbecility and even idiocy are the result of syphilis;" and, even Thom makes the statement that "syphilis is largely responsible for idiocy and imbecility."

Dr. Neal A. Dayton, Asst. Supt. of Wrentham, Mass., State School,<sup>1</sup> states in his capable paper, read before the New England Society of Psychiatry of North Hampton, Mass., Sept. 24, 1924, that in 1922 he made Wassermann tests on 1,631 children and the results of his examina-

tions were much at variance with prevalent opinion as to the incidence of syphilis, among mental defectives.

Dr. Dayton found only fifty-seven positive cases in his entire group; seven of these were of the moron type with acquired syphilis, and twenty-eight of congenital syphilis.

Eleanor Weinbridge, psychologist of Cleveland, Ohio,<sup>2</sup> in an examination of a series of twenty-five girls chosen at random, with an average of eighteen years, found six cases of acquired syphilis, all morons. All were lazy, underfed and blind, and all committed to feeble minded institutions.

French syphilographers in a recent meeting in Brussels in 1926, discussed congenital syphilis and endocrine dysfunction of young girls, finding proteiform disturbances, dejection, lassitude, and instability. The patients were congenital syphilitics of the first generation, where father or mother or both had been infected.

I have examined a series of about one hundred ten cases of mental defectives, in the Chicago State Hospital and find a history of syphilis in seventeen cases, of which four are of the moron type with acquired syphilis, and thirteen were congenital, with a history of one or both parents afflicted with syphilis; probably more could have been proven, but the histories were incomplete as to parentage or the parents were evasive and refused to disclose their own conditions, when questioned.

Heredity is a proven law, as inexorable in the descending, as it is beneficent in the ascending scale, whether it be direct from parent to child, collateral as from relatives, or reversional, reappearing through future generations.

Again the knowledge of causation and the assurance that many pathways lead to one condition, which may be doubled or quadrupled through inheritance, should have its influence in inducing means of prevention, not by destroying the life of the weakling, but by refusing him to perpetuate a maimed existence.

At the present time institutions are inadequate to admit all these cases and they are constantly breeding their kind, and it is increased by non-institutional training and they have not the training to readjust themselves.

The number of mental defectives in hospitals have materially increased to capacity. There



were 11,942 of both sexes in hospitals of the United States in 1923.

It is pitiful to think of these mortals who are not responsible for their condition, being handicapped by their inheritance.

What a problem for some one! How can we better this problem of the next generation, so as to decrease the number of dependents in State Institutions—probably by personal contact, teaching in the public school, or by radio talks, better by candid talks between physician and parent.

Still this method seems impossible when we consider statistics. There were about 7,500 children received at Ellis Island, during the year of 1923, and after examination, 4,000 plus were found to be subnormal, and were admitted to this country under protest, adding to the already large number of defectives. So it goes from year to year.

Perhaps the best treatment would be obtained by making and enforcing a law, which would compel an examination and prevent marriage relations between these defectives.

But to whom shall we look to for such a law?

How will we solve this problem?

#### REFERENCES

1. Neal A. Dayton: Syphilis in the Etiology of Mental Deficiency. *Mental Hygiene*, October, 1925.
2. Eleanor Weinbridge: Social Adjustment of Moron Girls. *Mental Hygiene*, April, 1926.

## Society Proceedings

### ADAMS COUNTY

March 14, 1927.

This was the regular meeting of the society held at the Elks Club and was called to order at 8:20 P. M. by the president. Twenty-seven members and four guests were present.

The chairman of the committee to whom the communication in regard to the venereal clinic proposition had been referred asked for more time. The matter of a diphtheria prevention campaign was referred to the Program Committee by the Public Health Committee. Dr. Frank Cohen reported for the committee appointed to investigate a plan of expediting the business of the society and made the following report: "That the by-laws of the Adams County Medical Society be amended to provide for a permanent Executive Council. This Council is to consist of seven (7) members—two (2) of which shall be the then president and secretary of the society.

"The other five (5) members of the Council shall be elected to membership as follows: Three (3) elected by the society membership till the next annual election, two (2) elected for the remainder of this year and for one more year. At the annual elections the places of the retiring councilors shall be filled, by

election by the Society membership, for a period of two (2) years."

#### SECTION I

##### Duties. Quorum

##### The Duties of the Council

The Council shall be the legislative and executive body of the society and shall conduct all business not otherwise provided for by the constitution and By-Laws. No bill for current or incidental expenses shall be paid until it has been approved by the council, except for such recurring charges as the council may designate. The Council shall have charge of the property of the Society, real and personal, including all bequests and donations, and shall administer, invest and control it. The Council shall designate the institutions, in which the personal property shall be deposited and the manner of depositing and withdrawing such property, but the Council shall not appropriate nor extend funds for other than current, incidental and regularly recurring expenses, without the approval of the society.

Four (4) Councillors shall constitute a quorum for the transaction of business.

#### SECTION II

##### Regular Meetings of Council

The Council shall hold a regular meeting each month. One notice of the time and place of meeting shall be sent to each Councillor by the secretary.

#### SECTION III

##### Special Meetings of Council

Special meetings of the Council may be called by the President at any time and shall be called by him upon the request of two Councillors. Notice shall be sent to the Councillors in advance of any special meeting and shall contain information as to the nature of the business to be considered at the meeting. No other business shall be transacted.

#### SECTION IV

##### Meetings of the Council Open

Members of the society may attend the meetings of the Council but they shall not be permitted to take part in the proceedings unless by consent of the Council.

#### SECTION V

##### Attendance of Councillors

A councillor absent from three successive regular meetings, unless absence is satisfactorily explained, shall forfeit his membership in the Council. This provision shall not apply to the President nor the Secretary of the Society.

#### SECTION VI

##### President and Secretary of the Council

The President and Secretary of the society shall hold like offices in the Council.

#### SECTION VII

##### Chairman of Committee

The Chairman of each standing and special committee shall present to the Council at its regular meetings a report of its committee meetings.

## SECTION VIII

## The Society and the Council

It shall be the duty of the secretary at the regular monthly meetings of the society to make a report of the transactions of the Council, reading the minutes of the preceding meeting. The Council may refer to the society in general session for action such matters as they deem sufficiently important as to call for society action.

This motion is to be put on passage at the April meeting. The Secretary read a letter from the Educational Committee of the Illinois State Medical Society in regard to cancer control. Dr. Center reported that the Osteopaths were attempting to secure separate recognition and now had a bill pending in Springfield. A motion was carried that the Secretary be instructed to send a telegram to Mrs. Mary McAdams, local Representative, stating our protest in regard to this. The Secretary reported that a local druggist had submitted some advertising matter for approval by the society. A motion was carried that this be laid on the table for one month. The Secretary reported that plans were being made for the annual picnic and also an all-day meeting sometime next fall.

At the scientific session Dr. Ralph McReynolds read a paper on the "Symptomology and Diagnosis of Diabetes." Dr. Frank Cohen on the "Pathological and Laboratory Management of Diabetes." Dr. Warren Pearce on the "Treatment of Diabetes" and Dr. Earl Caddick on the "Surgical Aspect of Diabetes." Dr. C. A. Wells on "Anesthesia and Diabetes."

The discussion on the above papers was led by Drs. Charles Ericson and H. J. Jurgens. The symposium which was arranged by Dr. Jurgens proved very interesting and was thoroughly enjoyed by all. Dr. Swanberg gave a brief report on the recent meeting of the American College of Physicians at Cleveland.

A motion was carried for adjournment at 10:50 P. M.

HAROLD SWANBERG, M. D.  
Secretary.

## COOK COUNTY

*Joint Meeting Chicago Medical Society and the Aux  
Plaines Branch, March 2, 1927*

1. Congenital Ciliated Epithelial Cyst on the Floor of the Mouth with Lantern Slide Demonstration ..... Louis Schultz
2. Present Day Problem of Surgery of the Thyroid ..... John de J. Pemberton, Mayo Clinic  
Discussion by Nelson D. Percy, Ward E. Potter, Jos. L. Nortell.

*Joint Meeting Chicago Medical Society and the North  
Shore Branch, March 9, 1927*

1. Syphilis—Modern Medical Viewpoint ..... Frederick Tice  
Discussion by Francis Senear, Victor Lespinasse, Harry Hedge.
2. Preliminary Report on Radium Salts in Systemic Infections, and Case Reports on Ulcers of the Stomach and Duodenum, Myocarditis,

Endocarditis and Arthritis ..... Findley John  
Discussion by M. J. Hubeny.

*Joint Meeting Chicago Medical and the Chicago Uro-  
logical Societies, March 16, 1927*

1. The Mammalian Testis; Cryptorchidism Vasectomy, Transplantation, Heat Sterility, and Scrotal function ..... Carl R. Moore, University of Chicago
2. The Effects of Ovariectomy in the Fowl and Its Bearing on the Problem of Sex Inversion ..... L. V. Domm, University of Chicago

*Regular Meeting, March 23, 1927*

1. Some of the Surgical Lesions of the Blood Vessels of the Extremities (Illustrated with Lantern Slides) ..... Dean Lewis, Baltimore, Md.  
Discussion by Carl Hedbloom, Allan B. Kanel, Loyal Davis.
2. Agranulocytic Angina ..... Harry Jackson  
Discussion by Irving Graef, A. L. Hoyne.

*Joint Meeting Chicago Medical Society and the South  
Side Branch, March 30, 1927*

## Symposium on the Colon

1. Bacteriological Viewpoint ..... Chas. E. M. Fischer
2. Medical Viewpoint ..... A. A. Goldsmith
3. Neurological Viewpoint ..... Lewis J. Pollock
4. Surgical Viewpoint ..... Chas. J. Drucek  
Discussion will be opened by Robert Preble, R. W. McNealy, Julius Grinker.

## GREENE COUNTY

The regular quarterly meeting of the Greene County Medical Society was held in Carrollton last Friday.

After an enjoyable dinner and social hour at Hotel Lindsey for which we are indebted to the physicians of Carrollton the meeting was called to order in the Illini Club rooms by the president, Dr. A. K. Baldwin.

A short business session followed, after which Dr. A. R. Jarman read a paper on "Appendicitis" and Dr. George H. Garrison of St. Louis read a paper on "Erysipelas." Both papers showed careful preparation and presented the subjects in such an interesting and instructive manner that they called forth a free and profitable discussion, participated in by practically every physician present.

Eleven members and four visitors were present.

The next meeting will be held in Greenfield June 10. This is our annual picnic meeting, to which all the physicians of the county are invited. Come and bring your wives, sons, daughters and friends.

We hope to have Dr. Pfeifferberger, president of our State Society, with us on that occasion.

W. H. GARRISON,  
Secretary.

## WINNEBAGO COUNTY

The Winnebago County Medical Society held its monthly meeting and dinner on March 1, 1927. Dr. Jerome Head, instructor in surgery at the University of Illinois Medical School, spoke on "The Use of Lip-



iodol in Thoracic Surgery." And Dr. Carl A. Hedblom, professor of surgery at the University of Illinois School of Medicine, spoke on "The Differential Diagnosis and Treatments of Acute Abdominal Lesions."

Both addresses were illustrated with lantern slides.

K. G. WOODWARD,  
Secretary.

### Marriages

EUGENE L. HASTINGS, Raymond, Ill., to Miss Opal Leigh of Taylorville, January 24.

JOHN E. MCCORVIE to Miss Anna Wieting, both of Peoria, Ill., January 11.

RAYMOND S. SHURTLEFF, Chicago, to Miss Mildred Pomeroy of Abingdon, Ill., February 20.

### Personals

Dr. Ralph, B. Bettman, Chicago, addressed the Elgin Physicians' Club, March 16, on "Chest Surgery."

Dr. Roy S. Barusback, Edwardsville, has been elected president of the staff of St. Elizabeth's Hospital at Granite City.

Dr. A. H. Smith, medical director and superintendent of the Livingston County Sanatorium, Pontiac, has resigned and gone to Ontario, Canada.

Dr. William H. Olmstead, St. Louis, addressed the Williamson County Medical Society, Herrin, March 10, on "X-Ray Diagnosis of Gallbladder Diseases."

Dr. Hugh O. Jones has been promoted to the post of assistant commissioner of health of Chicago to take the place of Dr. J. C. Geiger, who was made executive assistant to the commissioner of health.

Dr. Charles W. Grady, who has been transferred to the state hospital at Alton as chief-of-staff, will be succeeded at the Watertown State Hospital by Dr. Ulysses G. Auer.

Dr. George W. Duvall, superintendent, Central Free Dispensary, Rush Medical College, addressed the Physicians' Fellowship Club, 2451 Kedzie Boulevard, March 4; his subject was "Are Medical Clinics Abused by the Public?"

Dr. Lawrence H. Mayers addressed the Chicago Society of Industrial Medicine and Surgery, March 7, on "Indications for and Methods of Administration of Foreign Protein," and Dr. Sydney Walker, Jr., "Industrial Eye Injuries."

Dr. Barton Cooke Hirst, Philadelphia, addressed the Chicago Gynecological Society, March 18, on "Ovarian Dysfunction Dependent on Abnormalities of the Ductless Glands," and Dr. Jacob P. Greenhill on "A Human Ovum Approximately Nineteen Days Old."

Dr. Jacob J. Mendelsohn addressed the Chicago Tuberculosis Society, March 10, Brevoort Hotel, on "Tuberculosis Among Mexicans in Chicago"; Dr. Robert S. Berghoff, "Recent Impressions of the Tuberculosis Situation in Europe," and Dr. Edwin P. Sloan, Bloomington, on "Tuberculosis and Goiter."

Members of the Chicago Medical Society held a dinner, March 23, at the Hamilton Club in honor of Dr. Dean Lewis, Baltimore, who addressed the society that evening.

Dr. Ralph H. Kuhns, Director of the Department of Pediatrics at the Illinois Post-Graduate Medical School, has been appointed Assistant Attending Physician to the Children's Memorial Hospital, Chicago, and a member of the Faculty in Medicine of the University of Chicago.

### News Notes

—Members of the staff of the Municipal Tuberculosis Sanitarium reported on the work done by the staff in the study of intestinal tuberculosis before the Chicago Roentgen Society, March 10; Dr. Karl J. Henrichsen discussed the clinical aspect; Dr. Carroll E. Cook, the roentgenologic data, and Dr. Henry C. Sweany the pathologic conditions.

—The Chicago Laryngological and Otological Society met March 7; among others, Dr. Edwin McGinnis spoke on "Nonopaque Foreign Body in the Tracheobronchial Tree, Diagnosis and Bronchoscopic Treatment," and Dr. Harry L. Pollock on "Travel Notes of Otolaryngologic Interest."

—Dr. Jerome R. Head, instructor in surgery, and Dr. Carl A. Hedblom, professor and head of the department of surgery, University of Illinois College of Medicine, Chicago, addressed the Winnebago County Medical Society, March 1, Rockford, on "Use of Lipiodol in Thoracic Surgery" and "Differential Diagnosis and Treatment of Acute Abdominal Lesions," respectively.

—The Home and Public Welfare Department of the Chicago Woman's Club gave a luncheon.

March 25, in honor of Dr. Wendell C. Phillips, New York, President of the American Medical Association. Dr. Phillips spoke in the interest of the work for crippled children, Chicago League for the Hard of Hearing, Prevention and Relief of Heart Disease, Industrial Education of the Adult Blind, and Prevention of Blindness.

—The Society of Medical History of Chicago and the Institute of Medicine held a joint meeting, March 18, Dr. David J. Davis "The Quakers in Medicine"; Chauncey D. Leake, Ph. D., Madison, Wis., "Medical Caricature in the United States"; Dr. Richard Dewey, San Francisco, "The Care of the Insane in Illinois," and Dr. Benjamin Barker Beeson, "Jean Martin Charcot: A Summary of His Life and Work."

—St. Clair County Medical Society gave a dinner, March 3, in honor of Dr. Jonathan L. Wiggins, East St. Louis, who has completed fifty years in the practice of medicine and many years as a member of the society. Dr. Wiggins' friends from other counties were invited to the dinner. Dr. Harry M. Conner, Mayo Clinic, Rochester, Minn., gave an address on "Differential Diagnosis of Conditions Associated with Splenomegaly."

—Dr. William Carpenter MacCarthy, Mayo Clinic, Rochester, Minn., and Dr. Arthur D. Black, dean and professor of dental pathology and operative dentistry, Northwestern University Dental School, Chicago, were the speakers in the cancer campaign conducted under the auspices of the Morgan County Medical Society, the chamber of commerce, and the American Society for the Control of Cancer, with the assistance of the local hospitals, at Jacksonville, March 10.

—Under the auspices of the Illinois Society for Mental Hygiene, the Association for Child Study and Parent Education and the Central Council of Child Education, a one day conference was held at the Palmer House, March 5, on "The Child." Prof. Ernest R. Groves, Boston University, gave an address on "Personality and Social Adjustment," and Edwin A. Kirkpatrick, president, state normal college, Fitchburg, Mass., on "School Training and Parenthood." John B. Watson, LL.D., author of "Behavior," spoke on "Technic and Methods in the Study of Children."

—At a meeting of the Elgin Physicians Club, Dr. Ralph B. Bettman, F. A. C. S., of North-

western University and Michael Reese Hospital gave a very interesting and instructive talk on "Chest Surgery." The talk was illustrated with lantern slides and followed by discussion.

—Dr. Clinton C. Collier of 25 E. Washington St. Chicago, formerly professor of otolaryngology, General Medical and Hahnemann Medical Colleges, has retired from active practice and has located at Whitehall, Mich.

—Dr. I. Sherry of the University of Illinois Medical College, on March 2, 1927, addressed the Will-Grundy County Medical Society on ultra-violet light in Pediatrics."

—Dr. Irving Stein of Michael Reese Hospital and Northwestern University Medical School spoke and illustrated with lantern slides "The Mode of Investigation of Sterility" before the Will-Grundy County Medical Society, March 9, 1927.

Dr. Ernest S. Bishop, known around the world for his work in narcotic addiction, died at his summer home in Blandford, Massachusetts, Monday, November 15.

Doctor Bishop, who was born in Pawtucket, Rhode Island, November 29, 1876, was graduated from Brown University, where he won recognition as an athlete in 1899, and from Cornell Medical School in 1908. From the medical school we went to Bellevue Hospital as an intern, remaining there as resident physician until 1912.

Doctor Bishop was clinical professor of medicine in the New York Polyclinic Medical School, visiting physician to Saint Joseph's Hospital, and consulting physician to Saint Mark's. During the war he served in the army as a diagnostician. He was a Fellow of the American College of Physicians, of the New York Academy of Medicine, and the American Public Health Association, and associate editor of the *American Medicine*. His publications include "The Narcotic Drug Problem," which has run into several editions.

## Deaths

WILLIAM ENOS BARNES, Charleston, Ill.; American Medical College, St. Louis, 1903; aged 58; was accidentally shot and killed, February 22, at Groveland, Fla.

JAMES M. BOYLES, Flora, Ill.; Cincinnati College of Medicine and Surgery, 1872; Civil War veteran; aged 82; died, February 12, of heart disease.



SAMUEL B. CARY, Cairo, Ill.; University of Nashville Medical Department, 1881; member of the Illinois State Medical Society; aged 76; died, February 24.

HENRY TRAVERS COLE, La Grange, Ill.; Hahnemann Medical College and Hospital, Chicago, 1894; aged 56; died, February 14, following a cerebral hemorrhage.

LEONIDAS A. L. DAY, Chicago; Pulte Medical College, Cincinnati, 1885; New York Homeopathic Medical College and Hospital, Chicago, 1890; aged 66; died, March 1, of arteriosclerosis.

WILLIAM A. EDWARDS, Maywood, Ill.; Milwaukee Medical College, 1908; a Fellow, A. M. A.; member of the State Medical Society of Wisconsin and the American Academy of Ophthalmology and Oto-Laryngology; aged 62; died, February 25, at the U. S. Veterans' Hospital Edward Hines, Jr., of tuberculosis.

JOHN CLIFTON EPPERSON, Kansas, Ill.; Cooper Medical College, San Francisco, 1882; formerly county coroner; aged 78; died, January 26, of heart disease and arteriosclerosis.

WILLIAM KINDOL FARLEY, Fulton, Ill.; Rush Medical College, Chicago, 1887; a Fellow, A. M. A.; past president of the Whiteside County Medical Society; aged 76; died, February 12, of pernicious anemia.

MICHAEL THOMAS HEFFERNAN, Decatur, Ill.; Rush Medical College, Chicago, 1901; a Fellow, A. M. A.; aged 55; died, February 12, of abscess of the liver.

HARVEY L. HENLINE, Pontiac, Ill.; Physio-Medical College of Indiana, Indianapolis, 1904; member of the Illinois State Medical Society; aged 69; died, February 14, at the Indiana Christian Hospital, Indianapolis, of coronary embolus.

ALOYSIUS J. KANNE, Peoria, Ill.; St. Louis Medical College, 1886; a Fellow, A. M. A.; aged 62; died, February 26, at the Proctor Hospital, of heart disease.

JOSIAH T. KRETSINGER, Leaf River, Ill.; Bellevue Hospital Medical College, New York, 1885; a Fellow, A. M. A.; for twenty years secretary of the Ogle County Medical Society; aged 78; died February 7, of hypostatic pneumonia.

FRANCIS ADONIJAH LANE, Chicago; Missouri Medical College, St. Louis, 1899; a Fellow, A. M. A.; professor of ophthalmology, University of Illinois College of Medicine; member of the American Ophthalmological Society; on the staffs of the Illinois Eye and Ear Infirmary, the Presbyterian and Illinois Central hospitals; aged 52; died, February 17, at the Grant Hospital, of diabetes.

LOUIS J. MAYWIT, Chicago; Rush Medical College, Chicago, 1895; a Fellow, A. M. A.; aged 64; died, March 5, of carcinoma of the colon.

ROBERT MARION MCCALL, Metropolis, Ill.; University of Louisville (Ky.) School of Medicine, 1876; aged 79; died, February 6, of cerebral arteriosclerosis.

MARY REIS MELENDY, Chicago; Bennett College of Eclectic Medicine and Surgery, 1877; aged 85; died, February 17, of acute dilatation of the heart and pulmonary edema.

ALFRED J. OGRAM, Jacksonville, Ill.; Western Reserve University School of Medicine, Cleveland, 1883;

member of the Illinois State Medical Society; past president and secretary of the Morgan County Medical Society; on the staff of the Passavant Memorial Hospital; aged 68; died Dec. 11, 1926.

EUGENE W. RUGGLES, Chicago; University of Michigan Homeopathic Medical School, Ann Arbor, 1888; a Fellow, A. M. A.; aged 62; died, February 28.

MORITZ SCHULTZE, Chicago; Rush Medical College, Chicago, 1894; a Fellow, A. M. A.; aged 66; died, January 29, of cerebral hemorrhage.

OTTO WALCOTT SIMPSON, Peoria, Ill.; Chicago College of Medicine and Surgery, 1908; a Fellow, A. M. A.; past president of the Peoria County Medical Society; served during the World War; on the staff of St. Francis Hospital; aged 50; died, February 22, at San Diego, Calif., of heart disease.

OLIVER BENJAMIN THOMPSON, Carbondale, Ill.; National Medical University, Chicago, 1903; a Fellow, A. M. A.; aged 54; died, February 15, of heart disease.

THEODORE WILD, Chicago; Rush Medical College, Chicago, 1865; member of the Illinois State Medical Society; Civil War veteran; aged 92; died, Dec. 13, 1926, at the Alexian Brothers Hospital, of hernia.

ADELMA G. PATTON, for 35 years a practicing physician and surgeon at Monmouth; Miami Medical College, Cincinnati, 1892; a member of the board of trustees of Monmouth College for 25 years; a member of Warren County Society, Illinois State Medical Society, Fellow, A. M. A., American College of Surgeons, American Radiological Society, and American Physiotherapy Society; aged 58; after an illness of only six days, died at his home, March 9, from lobar pneumonia.

CLARENCE BRUCE KING, well known surgeon, passed away Wednesday evening, March 23, at the West Side hospital after an illness of eleven days.

The son of Riley G. and Mary King, the late physician was born in 1873, near Peru, Ind. Twenty years later, in 1893, Dr. King was married to Estella M. Stiles, also of Peru. Mrs. King survives her husband, as do a son, Marcus R., and a daughter, Elizabeth Winifred.

Dr. King had been a member of the Faculty of the College of Physicians and Surgeons for twelve years. During the late war Dr. King held the rank of captain and was stationed for seven months at Camp Grant. He was a nephew of the late Oscar A. King, founder of the Lake Geneva Sanitarium, of which organization the late physician was a staff member. Further he was president of the Chicago Society of Industrial Surgeons; Medico-legal Chairman of Illinois; member of the State Medical Council; member of the American Medical Association; Chicago Medical society, and the Illinois State and the West Side Branch Medical societies. Clubs to which he belonged included the Chicago Yacht club, Maywood Country club, Indiana Society and Phi Rho Sigma fraternity, the American Legion and the Chicago Medical post. A brief tribute to Dr. King's service to humanity and to his profession appears elsewhere in this magazine.

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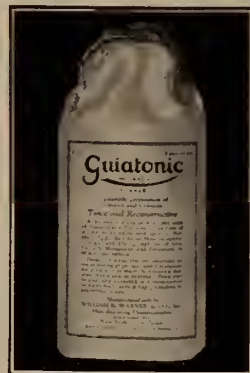
## The Lingering Cold

is gradually being recognized as one of mankind's gravest dangers, owing to the constant invitation it offers to much more serious ills. Realizing this, it is easy to understand the painstaking attention physicians now give to even the simplest nose and throat infections.

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## Guiatonic

*A generous trial quantity free upon request. William R. Warner & Company, Inc., Manufacturing Pharmacutists since 1856. 113-123 West 18th Street, New York City*



A palatable preparation of special salts of guaiacol and creosote which may be freely given to the weakest patient, without fear of gastric disturbance. *It contains no narcotics.*

Indicated in all depressed or debilitated conditions, or whenever a tonic is required.



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Built and equipped in 1907 for the specific purpose of treating NERVOUS and MILD MENTAL DISEASES

Building absolutely **Fireproof**. Non-institutional in appearance, accommodations modern and homelike atmosphere prevails. Sixty acres of park with beautiful views over lakes. Every essential for treating nervous cases provided, including extensive baths and separate occupational departments under supervision of trained teachers. Number of patients limited assuring personal attention from the staff.

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# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF  
THE ILLINOIS STATE MEDICAL SOCIETY

VOL. LI

OAK PARK, ILL., MAY, 1927

No. 5

## ILLINOIS MEDICAL JOURNAL

Published monthly by the Illinois State Medical Society  
under the direction of the Publication Committee of the  
Council.

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Send original articles and all communications relating to advertisements to Dr. Charles J. Whalen, Editor, 6221 Kenmore Avenue, Chicago.

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## Editorial

### CONSTRUCTIVE SUGGESTION TO DR. BEVAN ON MEDICAL ETHICS FROM THE McLEAN COUNTY MEDICAL SOCIETY

Bloomington, Ill., March 24, 1927.

Dr. Arthur Dean Bevan,  
122 South Michigan Avenue,  
Chicago, Illinois.

Dear Doctor Bevan:

We wish to present to you some arguments in regard to a point in medical ethics, that while not specifically stated in the code of ethics of the A. M. A., yet one which has been established and observed by the profession in downstate Illinois for many years. We feel sure that you, as well as several other very prominent men in the profession, have never had your attention called to it.

The articles that were published in several newspapers, one of which was "The Chicago Tribune," issues of February fourteenth and fifteenth, and for which the "Tribune" distinctly gives you credit, asserting that you "had provided the reporters with convenient galley proofs" of your remarks, lead us to believe that you are unaware of this point in ethics that has been so widely accepted by your professional brethren.

Now, Doctor Bevan, we appreciate all the great things that you have accomplished in your past career. We appreciate the fact that you have been a man of high ideals and have always had the courage of your convictions, and we consider you a real man as well as a very great surgeon. You certainly have been one of the leaders of the profession for many years, and one of the wheel horses of organized medicine. For about twenty years you have been chairman of the Council on Medical Education and Hospitals. Knowing you to be a man of clear discernment, high ideals and honesty of purpose, we want to call your attention to the particular phase of



this incident which seems to the downstate members of our profession to be really quite important. We greatly desire that you see this matter in what we believe to be the proper light.

Twenty or more years ago it became evident to all the thinking members of the profession in downstate Illinois that one of the greatest obstacles to the high standing of our profession in the community, to harmony in the profession, and to our own welfare from the standpoint of professional men as well as to our business success, was the practice then quite common for each practitioner to criticize and make to the laymen derogatory statements concerning all other practitioners in his vicinity. In towns having five or six physicians, it was common practice for each to criticize and malign, at every opportunity, the other members of his profession. This practice not only kept the physicians at sword's points with each other (frequently they would not speak when they met on the street), but it destroyed the confidence of the entire community in them themselves. Thus, popular opinion in the community came to class all doctors as knaves, and as undeserving of respect or confidence.

When the pernicious effect of this practice became evident it was not long until a new rule of ethics was generally accepted as a part of our code throughout downstate Illinois. That rule is—that no member of the profession can go outside of his professional circles and voice to the laymen criticisms of the other members of his profession, or take his quarrels and differences of opinion with other members of the profession to the laity, without being considered guilty of unethical conduct.

In small communities the effect of a physician going to the laity with criticisms or derogatory charges concerning brother physicians, or with his own side of a controversy with another member of his profession, is quite apparent. In great cities like Chicago the effect of such procedure cannot be seen and evaluated, as it can in smaller communities. It gives the layman an incorrect idea of his relationship to the medical profession. The layman is thus educated to think that he is the judge, the jury and even the supreme court, with special dispensation to pass judgment upon the conduct of the doctor. The fact that he is appealed to by a physician to exercise his right in regard to a matter about which he knows

nothing, gives him a false idea of his own importance with relation to the medical profession, and convinces him that every doctor is to be viewed with alarm and suspicion, and subjected to constant surveillance.

It would be no more ridiculous for a court to try a case before a jury of men who could not understand the language used in the courtroom, than it is for a doctor to appeal to the laity to settle differences between members of the profession, or to pass upon general professional conduct. Especially is this true since organized medicine has regularly constituted committees and councils ready to act as a jury and to hear such pleas at any time. Why should any fair-minded physician want to impose his personal opinions in regard to controversial professional questions upon the laity? Such might well be done by an unscrupulous individual in trying to force his will upon the rest of the profession with appeals to the mob psychology of the uninformed with misrepresentations and half truths. How can we expect the medical profession to enjoy the confidence of the people when prominent members make a practice of "washing our dirty linen in public?"

On one occasion in one of the neighboring cities, several of our members heard three very prominent physicians criticize the general practitioner and the whole medical profession while speaking to a large lay audience. Yet, those three doctors, who are leaders in the profession and officers in a large and powerful medical association, criticized the general run of the profession in a most bitter and unnecessary attack. How was it possible for any member of that audience ever to have the same confidence in any member of the medical profession thereafter? What more could the quack ask than such a performance by leading men in our profession? But more followed! A *layman*, secretary of the medical association that had arranged the public meeting, also spoke at length, and in similar emphatic and critical manner. And, which is more, his talk, a most vicious attack upon the profession, was sponsored by the prominent men upon that platform. A layman attacking members of our profession publicly and sponsored and applauded by leading lights of the same profession! Yet, these men are sincere; no one can doubt their sincerity. They simply did not understand that they were violating a standard

of ethics that had been set up and accepted and observed by most of the men of this community for many years; a standard of ethics that had one of us violated, he would perhaps have been compelled to resign from his medical society. At least he would have been most severely censured in his medical society.

We take no issue with anyone in regard to his honest opinions. That the doctors are bootleggers and that ninety-nine per cent of the prescriptions that are written for whisky are bootlegging prescriptions, is apparently your opinion on that subject. This we have no desire to change; but in case we had such a desire we would take the matter up with you directly, or through the medium of some medical society where the audience that is called upon to listen and decide the matter, would be men possessed of requisite professional education.

Many physicians are of course at variance with you in regard to the question of the necessity for the use of liquor; and honestly believe that liquor is often indicated. I am sure that none of them will doubt your statement that at the Presbyterian Hospital not a single bottle of whisky has been issued since prohibition, and that more than twelve thousand patients a year have been taken care of. However, many of them honestly believe that had you used liquor when it was really indicated, you might have cut down your death rate. While on the other hand, you probably believe that if whisky were not in existence and could not be procured by anyone, that the death rate of all these other doctors would be reduced. Your sincerity is not questioned; but we do question the advisability, and your ethical right, to go to the laity with such statements in regard to the general profession.

You were also credited by the "Tribune" with having furnished convenient galley proofs of your remarks for publication, in which you accused the general practitioner of "knaveish practice by which a general practitioner sends a patient to a specialist for an operation and then shares in the specialist's loot." We feel that we can vouch for the truth of the statement that in Central Illinois both remarks are in the main untrue and unjust. There are doubtless some rogues in our profession, but we are sure that the percentage is relatively very small. However, the accuracy and correctness of your opin-

ions is not the point—but whether it is unethical for a physician to make public derogatory remarks about members of the profession and broadcast them through the newspapers to the laymen, who cannot know whether such statements be the truth.

Twenty years or more ago surreptitious fee splitting was perhaps somewhat of a general practice in downstate Illinois. However, at present, the members of the profession have by their own efforts almost entirely eliminated such practice.

No difference how many social shortcomings, or moral weaknesses, or professional limitations the average physician may have, yet he is nearly always, above all, loyal to the best interests of his patients. There is something about general practice which develops loyalty to the best interests of his patient in almost every general practitioner. The general practitioner or family doctor is the best protection that any patient can have against unnecessary or bungling operation or excessive charges. He is the best friend and adviser of his own patient in a time of need.

Many a general practitioner is accused by some big light in the profession of taking his patients to a lesser light for sordid reasons, when the truth of the matter is that the general practitioner has observed the work of both and sees that the lesser light by personal attention and honest endeavor gets better results than the big light with all of his laboratories and internes to assist him, and with less depletion of an already anaemic pocketbook. Can it be that the big light is justified in broadcasting to the laity tales of the honesty and ability of himself and his friends, and serious charges reflecting upon the horde of lesser lights, for the purpose of helping his failing business and bolstering up his declining power?

It is high time that some leading man in the profession, such as yourself, should speak up in defense of the general practitioner who has been so often slandered by a few leading men of the profession. Please permit us to suggest that instead of starting a crusade for prohibition, by going out to the uninformed laymen with accusations that the hardworking, honest and in most cases quite competent members of the profession are guilty of knaveish practice, picking the patient's pockets, and bootlegging; that you in



your high position and great attainments could accomplish far greater work by presenting a resolution to the American Medical Association, providing that any physician who wishes to criticize any member of the profession, or correct the conduct of the members of the profession, should do so by presenting his case to informed men, who are members of the profession. We feel that to act in any other manner should be distinctly contrary to the principles of ethics of the American Medical Association.

Also, we would respectfully urge you that you give your testimony to the honesty and loyalty of the general practitioners instead of voicing criticisms that destroy the confidence of the laymen in the profession. Why destroy the confidence of the laymen in all doctors, even if there are a few who do not measure up to the average?

Finally, let us urge you to try to combat, and by your efforts, aid in correcting a great deal of the slanderous publicity that is being given out to the laity in regard to the profession in general, by some men in high places. We do hope that we can enlist you in a movement to have all abuses in the medical profession corrected in and by the whole profession, not by an autocratic two per cent. We hope that we can interest you in promoting a better understanding in the whole medical profession, that the general practitioner and medical man will be accorded justice, and that we as a great and united profession will correct such abuses as exist within our own ranks. Certainly it becomes of paramount importance for the traitor to his medical brethren, who because of ulterior motive, invites the laity to sit as judge, jury and executioner upon his fellows, to be brought speedily to justice.

May we ask you to support the enclosed proposed amendment to the code of ethics of the American Medical Association?

(Note: See proposed amendment which follows this letter addressed to the council of the Illinois State Medical Society from the McLean County Medical Society.)

Most sincerely yours,

THE MCLEAN COUNTY MEDICAL SOCIETY.

Albert W. Meyer, President.

Ralph P. Peairs, Secretary.

March 24, 1927.

To the Council of the Illinois

State Medical Society.

Gentlemen:

We respectfully ask your consideration of the enclosed proposed amendment to the Code of Ethics of the American Medical Association; and if it meets with your approval we request you to instruct the delegates of the Illinois State Medical Society to the American Medical Association to propose this amendment, or one similar in effect, and urge its adoption.

THE MCLEAN COUNTY MEDICAL SOCIETY.

Albert W. Meyer, President.

Ralph P. Peairs, Secretary.

#### PROPOSED AMENDMENT TO THE PRINCIPLES OF MEDICAL ETHICS OF THE AMERICAN MEDICAL ASSOCIATION

*Resolved:* That section seven, Chapter II of the Principles of Medical Ethics of the American Medical Association, shall be amended by inserting after "profession," the fourth word in the fourth line, the following:

All questions of debatable medical custom, practice or conduct, and all other questions, the discussion of which may be derogatory to a licensed practitioner of medicine, or to the medical profession in general, shall be considered in official and duly appointed committees on ethical relationships, or shall be referred to the Judicial Council of the American Medical Association.

Making section seven of Chapter II to read as follows:

#### SAFEGUARDING THE PROFESSION

Section 7.—Physicians should expose without fear or favor before the proper medical or legal tribunals, corrupt or dishonest conduct of members of the profession. All questions of debatable medical custom, practice or conduct, and all other questions, the discussion of which may be derogatory to a licensed practitioner of medicine, or to the medical profession in general, shall be considered in official and duly appointed committees on ethical relationships, or shall be referred to the Judicial Council of the American Medical Association. Every physician should aid in safeguarding the profession against the admission to its ranks of those who are unfit or unqualified because deficient either in moral character or education.

THE MCLEAN COUNTY MEDICAL SOCIETY.

Signed by:

Albert W. Meyer, President.

Ralph P. Peairs, Secretary.

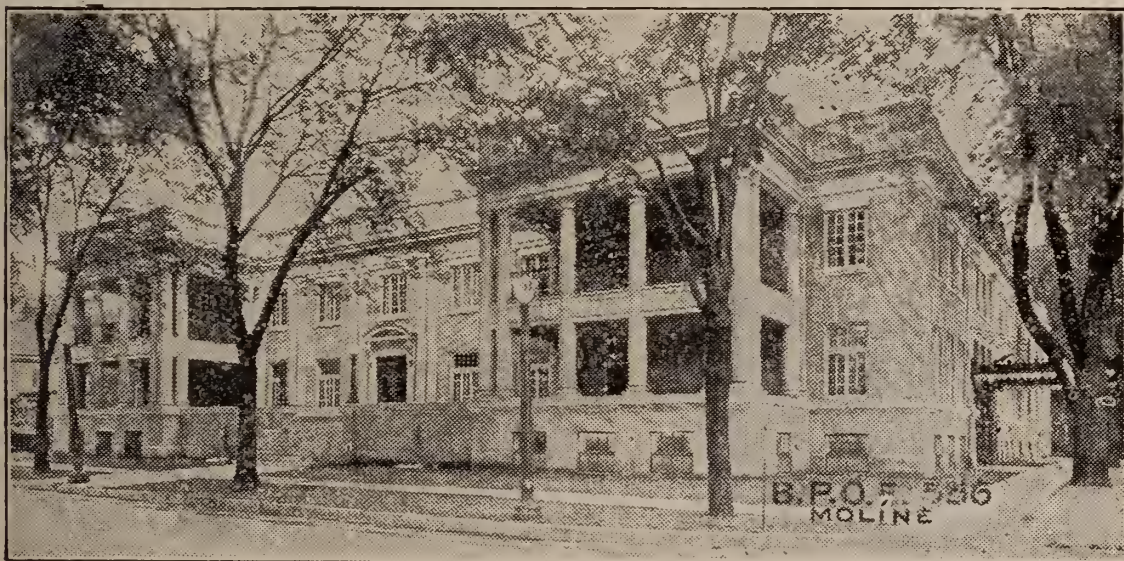
## THE ANNUAL MEETING AT MOLINE—A MESSAGE FROM THE COMMITTEE ON ARRANGEMENTS

Thirty passenger trains on three railroads will be at the daily service of members and guests bound for Moline to attend the seventy-seventh annual meeting of the Illinois State Medical Society. Hard roads, completed Route No. 3 from the north and south and completed Route No. 7 from the east, feed from every section of Illinois. Moline is nine driving hours from East St. Louis and six from Chicago or Springfield.

Moline serves a trade territory of 175,000 people in and about a county which is unsurpassed by any locality in the United States in points of

visit of Louis Joliet and Father Marquette in 1673. This nine hundred and ninety acres of the boyhood playground of Blackhawk has come to include not only factories and shrines, but also one of the finest golf courses in America.

During the hundred years of war among the English, French, Americans and Indians, natural advantages made Sauk-e-nauk the largest Indian village on the continent. Natural and commercial advantages placed the first bridge across the Mississippi not far from the same spot, the bridge which Abraham Lincoln saved for the Rock Island railroad in the peculiar Lincoln fashion; thus opening the plains states to railway development. Those same advantages still have influ-



\$250,000 Elks clubhouse of Moline where convention will be held and whose facilities will be opened to all physicians attending.

natural beauty, commercial possibilities and major historic interest.

Rock Island County was the scene of the westernmost campaign of the American revolution and bore a share in the tragic land warfare of 1812-14. Its strategic position has likewise given it play in every other major historic episode of the nation. The Arsenal Island is well worth a pilgrimage by Americans: a federal park, a national cemetery, a prison for Confederate soldiers and the final resting-place of some two thousand of their unvaccinated, an arsenal that gave employment to fifteen thousand people during the late war, it has been intimately bound in the progress of the Northwest Territory from the time of its first appraisal by white men, upon the

ence with the economists who have built a mid-west consciousness and who have pointed to Rock Island county of the middle west, as the center of our next and greatest industrial expansion.

Natural beauty is Rock Island county's own: we are anxious that you see it. Interrupted hill ranges thrown between glacial valley, dry beds and present beds of rivers, and all small enough in scale to permit the grasping of a birds-eye-view from an automobile. To the lover of beauty we commend Blackhawk's Watch Tower no less than the Hospital Hill at Watertown. A sunset drive from East Moline to Port Byron offers a treat for artists who have watched sunsets from both coast and from both mountain ranges.

The committee wishes to stress the community



spirit of welcome which the preliminary work has brought out: not a hotel has raised its rates (page 86, ILLINOIS MEDICAL JOURNAL of February, 1927); the contract offered for meeting-place is complete in detail and highly advantageous to the society; Moline retailers have signed exhibit hall contracts. The committee urges that members meet this spirit and indulge a family outing of value. There is room and to spare for all who can attend.

Committee on Arrangements: A. T. Leipold, chairman; Wm. D. Chapman, councilor; D. R. Nelson, president, Rock Island County Medical Society; P. H. Wessel, president, Moline Physicians' Club; K. W. Wahlberg, J. W. Seids, H. A. Beam, F. J. Otis, F. N. Davenport, G. D. Hauberg, T. L. Thomson, Hada Carlson, D. B. Freeman.

The several sub-committees have reported:

#### MEETING PLACE

H. A. Beam, Chairman

The Moline Elks Club offers a single building for all sessions, with halls of ample capacity. The contract offered by the Elks Club and accepted by our council is fine in spirit and complete in its appointments.

#### CLINIC MATERIAL

F. J. Otis, Chairman

Essayists wishing dry-clinic material or demonstrators wishing clinical patients should communicate their requests to the chairman, as early as possible. An ambulance for the transportation of patients and a nurse for their convenience are awaiting orders.

#### EYE, EAR, NOSE AND THROAT

Frank N. Davenport, Chairman

Reports a full day Tuesday in prospect: morning golf, noon business meeting, afternoon dry-clinics, and an evening banquet at Short Hills Country Club. Wednesday, scientific session.

#### INFORMATION AND HOTELS

G. D. Hauberg, Chairman

The committee requests that all hotel reservations be made through the chairman, rather than with the hotels direct. If this were done we believe that no visitor would have cause for complaint. The committee feels its responsibility as host no less keenly than do the Rock Island

county society and the Moline Physicians' Club and is now making a survey and list of garages for storage and parking use. This list will be available at our stand in the Registration booth at the Elks' building.

Visitors without advance reservation will be accorded service by an agent of the committee: hotel accommodations secured, baggage checked and delivered to room, information given, at the time of registering for the meeting.

*PLACE: Registration desk, Exhibit Hall, Elks Building.*

Windshield stickers, inviting police department courtesies for visiting automobilists, will be available at the desk and will appear, if possible, in the May issue of ILLINOIS MEDICAL JOURNAL.

#### SPORTS

T. L. Thomson, Chairman

*Golf Tournament*—Place: Short Hills Country Club. Cups: By Moline Physicians' Club. Play: Continuous. daylight hours. (It is hoped, however, that Thursday may be the principal day of play; thus avoiding conflict of hours.)

Please do bring your golf clubs and help make this a real tournament.

*Aeronautics*—Landing Field: Excellent, day or night; a half mile south of Rock River, five miles above its mouth. Outline lights; Neon light; Hangars for visitors.

Through the courtesy of Dr. C. C. Sloan free airplane rides are offered for a limited number of visitors.

#### ENTERTAINMENT

D. B. Freeman, Chairman

Wednesday night: Stag at the Eagles summer home on Rock River; a fish buffet-lunch, with suitable entertainment. Negotiations are under way looking toward a reasonable special flat-rate taxi service between the Elks Club and Rock Island or Davenport hotels.

#### LADIES' ENTERTAINMENT

Mrs. Hada Carlson, Chairman

Tuesday noon and afternoon: Luncheon bridge at LeClaire roof garden; luncheon, program, bridge. Late arrivals are urged to attend, whether for bridge or for social hour.

Tuesday evening: An open meeting of the society.

Wednesday morning: Sightseeing tour about Arsenal Island, Davenport, Rock Island, Blackhawk's Watch Tower, Moline Flying Field, Wattertown Hospital where luncheon will be served; return to Moline.

Afternoon: Garden party at the home of Dr. and Mrs. P. H. Wessel.

Evening: Movie, with special entertainment.

An especially cordial invitation is extended for the Moline meeting. The later spring date seems an advantage and the committee does hope that the ladies may grant us a generous attendance.

#### NOTES

Colonel D. M. King invites our guests to visit the Arsenal and use its golf course. The usual greens' fee will be the only charge.

Exhibitors will find sign painter, electrician and carpenter subject to call at rates already agreed upon. There will be no raising of rates.

Members of the Iowa society are invited to attend all sessions.

The programs of the Illinois Trudeau Society and of the Industrial Surgeons Society begin on Tuesday morning; courtesies extended.

#### PUBLICITY COMMITTEE.

### MAKE HOTEL RESERVATIONS EARLY ILLINOIS STATE MEDICAL SOCIETY ANNOUNCEMENTS

The seventy-seventh annual meeting of the Illinois State Medical Society will be held in Moline, May 31, June 1-2, 1927. In anticipation of one of the largest and best meetings in the history of the society, the committees on arrangements have inaugurated extensive preparations for the meeting and entertainment of the Society.

The committee on hotel accommodations urge that reservations for the meetings be made early.

The hotels have agreed that reservations may be made directly through our Hotel Committee. Those wishing to make reservation will please address Dr. G. D. Hauberg, chairman, Hotel Committee, Moline, Ill., stating hotel preference, etc.

Below will be found a list of the principal hotels in Moline, Rock Island and Davenport:

#### MOLINE HOTELS

##### *Leclaire Hotel:*

200 rooms and 70 apartments. Can accommodate about 400 persons.

#### Rates—

\$3.00 for a single room with tub and shower bath.

\$4.50 for a double room with tub and shower bath.

\$5.50 for a room with twin beds for two persons.

\$8.00 for a room with twin beds for four persons.

\$2.50 for a bed in an apartment.



Leclair Hotel, Moline, Ill.



Fort Armstrong Hotel, Rock Island, Ill.

##### *Campbell Hotel:*

Can accommodate about 25 persons.

#### Rates—

\$2.00 for room with bath (single).

\$3.00 for room with bath (double).

\$1.50 for room without bath (single).

\$2.50 for room without bath (double).

\$1.25 for room with single bed.

\$1.00 each for rooms with two full beds, four in room.

All rooms have hot and cold water, shaving mirror, etc.

##### *Hotel Mayfair:*

\$1.50 per person, 2 in room, without bath.

\$2.00 per person, 2 in room, with bath.

\$4.00 for double room.



## ROCK ISLAND

*Hotel Fort Armstrong:*

80 rooms. Can accommodate 160 persons.

## Rates—

\$2.25, \$2.50, \$3.00, \$3.50, \$4.00.

\$2.00 per person extra.

*New Harper Hotel:*

75 rooms available.

## Rates—

\$2.00 to \$2.50 for single room with bath.

\$1.50 for single room without bath.

\$4.00 to \$4.50 for double room with bath.

\$2.50 to \$3.00 for double room without bath.

Rooms with shower bath, \$4.00 and \$4.50 per day.

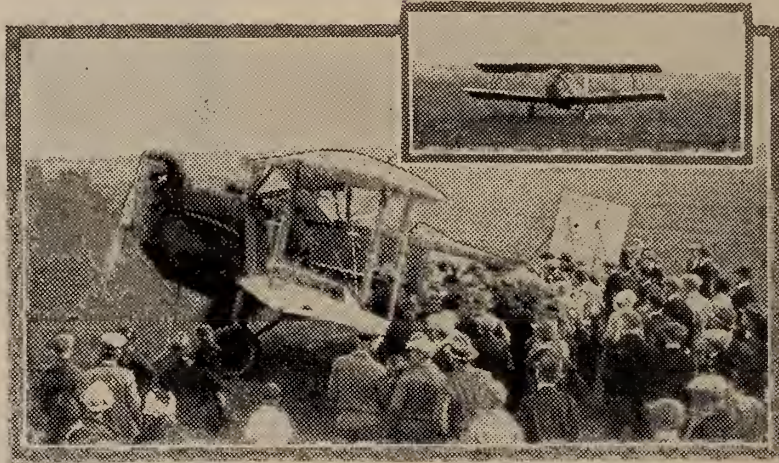
Rooms with tub bath, \$5.00, \$5.50, \$6.00 and \$7.00.

The above rates are for two people in a room.

Davenport 15 minutes by auto and 40 minutes by street car.

## MOLINE IN AVIATION

Moline is a pioneer in aviation and has one of the finest airports in America. It has a commercial aviation company which offers passenger service to all parts of America.



First Air Mail in Moline

*Como Hotel:*

50 rooms available.

## Rates—

\$1.75 to \$2.50 for single room with bath.

\$1.00 to \$1.75 for single room without bath.

\$2.75 to \$4.00 for double room with bath.

\$2.00 to \$2.50 for double room without bath.

*Hotel Harms:*

25 rooms available.

## Rates—

\$1.50 for single room without bath.

\$2.00 to \$2.50 for single room with bath.

\$3.50 to \$4.50 for double rooms.

All outside rooms; running hot and cold water.

Rock Island, 10 minutes by auto from convention headquarters; 20 minutes by street car.

The photograph shows a view at Moline airport when the first air mail plane arrived last spring. A huge crowd welcomed the air postman. Moline is a station on the Chicago-Dallas, Tex., air mail route.

## A FINAL MESSAGE FROM THE COMMITTEE ON ARRANGEMENTS

The committee on arrangements has completed preliminary tasks. Plans are made to entertain the largest attendance in the history of the society. Appointments for the seventy-seventh annual meeting will be found comfortable and congenial. You are welcome.

A. T. Leipold, chairman.

## REDUCED FARE ON RAILROADS FOR MOLINE MEETING

The Western and Central Passenger Associations have granted a fare reduction to those attending the Moline meeting and traveling by rail. This will be on a basis of one and one-

## DAVENPORT HOTELS

*Hotel Blackhawk:*

About 100 rooms available.

## Rates—

Rooms with lavatory and toilet, \$3.50 and \$4.00 per day.

half fare on the certificate plan from all points in Illinois, St. Louis and from Iowa.

The following rules must be observed:

Tickets must be purchased at the normal one way fare to Moline for the going journey, these may be purchased from May 21th to June 2nd, inclusive. When purchasing the ticket, ask the agent for a Convention Certificate or if none are available, a receipt giving the date, destination and the amount paid for the ticket.

See that the ticket reads to Moline and have the certificate or the receipt stamped with the same date as your ticket.

Sign your name on the certificate or receipt in the presence of the issuing agent.

Immediately upon arriving at Moline, the certificate should be deposited at the registration booth.

When the required number are collected, they will be validated by a representative of the railroad company and the secretary of the society, and returned to the owner. Upon presenting the validated certificate at the Moline railroad office, the return fare rate will be one-half the regular fare.

The Western Passenger Association requires a minimum of 150 certificates while the Central Association requires 250. If every physician and member of the family attending the meeting will ask for a certificate when buying the ticket there is but little doubt that the required minimum number will be available.

At the meeting last year in Champaign many in attendance failed to get the certificate, and we failed by a low margin to get enough to permit the reduced return fare.

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#### COUNTY MEDICAL SOCIETIES. ATTENTION

The annual meeting of the Illinois State Medical Society is the members' own meeting. The House of Delegates is the real official body of the Society. Every county society is entitled to one or more delegates, according to its membership. The by-laws of our society state that each component society is entitled to one delegate for each 75 members, and one for each major fraction thereof. Every society, no matter how small it may be, is entitled to one delegate. If the membership is 113, or more, the Society is entitled to two delegates. Selecting a dele-

gate for the annual meeting is an important event. The delegate should be pledged to attend the meeting unless unavoidably detained. In such an instance, the society should have an alternate delegate who will attend the meeting.

From the information available, we believe that the Illinois State Medical Society does have the best representation in its House of Delegates, of any of the larger societies. Last year 112 delegates were seated. The maximum number could have been 146. We hope this year that we will have a better representation than at any time in the past.

Every delegate seated in the House must have his official credentials, signed by the president and secretary of the county society to which he belongs.

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#### TO OUR EXHIBITORS

The committee on arrangements has arranged to have the Crandall Transfer and Warehouse Company, 1205-1209 Fourth Avenue, Moline, Illinois, receive all exhibit material sent to them. They will take it to their fireproof storage and keep it until your representative arrives, then take it to the floor of the exhibition hall on Monday morning, May 30th, the day before the meeting opens.

The electric current in the Elk's Club where the meeting is to be held, is A. C., 110 volts, 60 cycles. An electrician will be on the job prepared to do special wiring, a carpenter staff will be present to help arrange your exhibit, and an experienced sign painter will be ready to prepare signs or cards, as desired. The cost for these extra services will be entirely reasonable, and the men employed to do the work are thoroughly reliable and trustworthy.

If special furniture is desired, it can be arranged for by writing the chairman of the Committee on Arrangements, Dr. A. T. Leipold, Moline, Ill. Chairs and tables will be furnished to the exhibitors without cost. The society will have a competent night watchman on the job every night to protect your exhibits.

Yours for better service,

"Illinois State Medical Society."

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#### THE ANNUAL PRESIDENT'S BANQUET

The President's Banquet will be held at the Le Clair Roof Garden, Moline, at 6:15 p. m.,



Wednesday, June 1st, 1927. Every living past-president of the Illinois State Medical Society has been invited to attend the banquet as the guests of the Society. We have nineteen living past-presidents and everyone of this number expects to be present unless unavoidably detained.

The immediate past-president, Dr. J. C. Krafft will be the toastmaster at the banquet. The program will be short and the banquet will adjourn in time for the Wednesday evening program. A number of the distinguished invited guests will also be present.

Every member of the Illinois State Medical Society and all the guests are invited to attend the banquet which will be strictly informal. Tickets for the banquet may be procured at the registration desk, or from the Committee on Arrangements for \$1.50 each.

This will be the first time that all of the past-presidents of the society have tried to get together at such a function and surely it will be a great pleasure to all in attendance at the meeting to see these men who for a period of one year have guided the destiny of our organization.

There will be no lengthy speeches and only a very short program, the nature of which will not be divulged until that evening.

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#### PERIODIC HEALTH EXAMINATIONS AT MOLINE MEETING

Under the supervision of Drs. James H. Hutton and H. P. Saunders, a thorough physical examination of physicians will be made in connection with the 77th Annual Meeting in Moline. These men will be assisted by a number of experienced clinicians from both Chicago and down-state.

It is planned to run five booths, one man to each booth, and one Nose and Throat man also in attendance. Examinations will be conducted on Tuesday afternoon from 1:00 to 4:00, Wednesday from 9:00 to 12:00 and 1:00 to 4:00 and Thursday from 9:00 to 12:00. No examiner will be asked to work more than one-half day of three hours. The examination will be complete, including a complete urinalysis and a Wassermann.

Each councilor will be asked to name two or three competent men and the representative of the Scientific Service Committee in each district will also be asked to suggest the names of

two or three in the district to assist in conducting the examinations.

The supervisors are anxious to have fifty physicians from all parts of the state make an application for examination, and they will be given a card telling when they should report.

Periodic health examinations should begin with the physicians, and when we consider the fact that the death rate among physicians is higher than that of any other profession, it is time that we give this question more serious thought.

All physicians interested in having this examination made by unusually competent men, should write to Dr. H. P. Saunders, 4554 Broadway, Chicago, or to the office of the Educational Committee, Illinois State Medical Society, 58 East Washington Street, Chicago, and they will receive full instructions relative to the examination and the time they should report.

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#### THE EXHIBITS

The exhibits at the 1927 Annual Meeting will be very interesting to all who attend the meeting. They have been selected very carefully and every firm represented will be strictly reliable and worthy of your consideration. Many accessories of interest to practitioners of medicine in all of its specialties, will be shown at the meeting for the first time. We would respectfully request our members and guests to anticipate their wants before the meeting and make their purchases from the large array of products to be displayed. The exhibitors are all sending men in charge of their exhibits who are thoroughly conversant with their products and their indications, and meeting these men and having the opportunity to talk with them relative to the articles displayed will be more than worth the time and trouble.

In addition to the commercial exhibits, we will have many interesting scientific exhibits which will be of interest to all. We are favored by having the co-operation of a number of medical Educational institutions and organizations which will have some interesting material exhibited.

The scientific exhibits will be in a room adjoining that which contains the commercial exhibits.

## ILLINOIS STATE MEDICAL SOCIETY

## 77TH ANNUAL MEETING

Moline, Illinois, May 31, June 1-2, 1927

## OFFICERS

Mather Pfeiffenberger, President, Alton.  
 G. Henry Mundt, President-Elect, Chicago.  
 Earl D. Wise, First Vice-President, Champaign.  
 C. S. Nelson, Second Vice-President, Springfield.  
 A. J. Markley, Treasurer, Belvidere.  
 Harold M. Camp, Secretary, Monmouth.

## THE COUNCIL

K. R. Ferguson, 3rd District, Chicago, 1927.  
 Andy Hall, 9th District, Mt. Vernon, 1927.  
 ..... 6th District, 1927.  
 J. S. Templeton, 10th District, Pinckneyville,  
 1927.  
 J. S. Nagel, 3rd District, Chicago, 1928.  
 Wm. D. Chapman, 4th District, Silvis, 1928.  
 S. E. Munson, 5th District, Springfield, 1928.  
 I. H. Neece, 7th District, Decatur, 1928.  
 D. B. Penniman, 1st District, Rockford, 1929.  
 E. E. Perisho, 2nd District, Streator, 1929.  
 S. J. McNeill, 3rd District, Chicago, 1929.  
 Cleaves Bennett, 8th District, Champaign, 1929.  
 Wm. D. Chapman, *Chairman*.

## ILLINOIS MEDICAL JOURNAL

Charles J. Whalen, *Editor*, Chicago.  
 Henry G. Ohls, *Managing Editor*, Chicago.  
 J. W. Van Derslice, *Secretary, Publication Committee*, Oak Park.

## STANDING COMMITTEES

## PUBLIC POLICY

Emmet Keating, *Chairman*, Chicago.  
 Warren Johnson, Chicago.  
 George Michell, Peoria.

## MEDICAL LEGISLATION

John R. Neal, *Chairman*, Springfield.  
 Chas. E. Humiston, Chicago.  
 Edward Bowe, Jacksonville.

## MEDICO-LEGAL

C. B. King, *Chairman*,\* Chicago.  
 George Weber, *Secretary*, Peoria.  
 R. O. Hawthorne, Monticello.  
 J. R. Ballinger, Chicago.  
 C. A. Hercules, Harvey.  
 Walter Wilhelmj, East St. Louis.

\*Deceased.

## RELATIONS TO PUBLIC HEALTH ADMINISTRATION

Frank R. Morton, *Chairman*, Chicago.  
 Frank Maple, Chicago.  
 E. D. Levisohn, Chicago.  
 J. E. Tuite, Rockford.  
 E. P. Coleman, Canton.

## EDUCATIONAL COMMITTEE

K. R. Ferguson, *Chairman*, Chicago.  
 Charles J. Whalen, Chicago.  
 James H. Hutton, Chicago.  
 Wm. D. Chapman, Silvis.  
 Miss Jean McArthur, *Secretary*.

## SCIENTIFIC SERVICE COMMITTEE

Jas. H. Hutton, *Chairman*, Chicago.  
 Harold M. Camp, *Secretary*, Monmouth.  
 Mather Pfeiffenberger, Alton.  
 G. Henry Mundt, Chicago.

## SECTION OFFICERS

## SECTION ON MEDICINE

Leroy H. Sloan, *Chairman*, Chicago.  
 J. L. Sherrick, *Secretary*, Monmouth.

## SECTION ON SURGERY

E. P. Coleman, *Chairman*, Canton.  
 J. R. Harger, *Secretary*, Chicago.

## SECTION ON EYE, EAR, NOSE AND THROAT

Louis Ostrom, *Chairman*, Rock Island.  
 C. F. Yerger, *Secretary*, Chicago.

## SECTION ON PUBLIC HEALTH AND HYGIENE

H. V. Gould, *Chairman*, Chicago.  
 A. A. Crooks, *Secretary*, Peoria.

## SECTION ON RADIOLOGY

E. S. Blaine, *Chairman*, Chicago.  
 Harold Swanberg, *Secretary*, Quincy.

## SECRETARIES' CONFERENCE

Elizabeth R. Miner, *President*, Macomb.  
 J. W. Hamilton, *Vice-President*, Mt. Vernon.  
 W. J. Benner, *Secretary*, Anna.

## COMMITTEE ON ARRANGEMENTS

A. T. Leipold, *Chairman*, Moline.  
 Wm. D. Chapman, Silvis.  
 D. R. Nelson, Moline.  
 P. H. Wessel, Moline.  
 K. W. Wahlberg, Moline.  
 J. W. Seids, Moline.  
 H. A. Beam, Moline.  
 F. J. Otis, Moline.  
 F. N. Davenport, Moline.  
 G. D. Hauberg, Moline.



T. L. Thomson, Moline.  
Hada Carlson, Moline.  
D. B. Freeman, Moline.

#### MEETINGS OF THE HOUSE OF DELEGATES

*Tuesday Evening, May 31, 1927*

Elk's Club.

9:00—Meeting called to order by the President, Mather Pfeiffenberger for reports of Officers, Committees and other business to come before the House.

*Thursday morning, June 2, 1927*

Elk's Club

8:00—Meeting called to order by President for the election of officers, reports of Committees, Selection of place for 1928 meeting, and other new and unfinished business.

#### ENTERTAINMENT

An unusually attractive program of entertainment has been arranged for the Ladies by Dr. Hada Carlson, Chairman of the entertainment committee.

*Tuesday noon and afternoon*, luncheon bridge at the Le Claire roof garden.

*Wednesday morning*, sightseeing tour through Rock Island Arsenal grounds, "The Island Beautiful," Davenport, Rock Island, Black Hawk Watch Tower, Moline Flying Field, Watertown State Hospital, where luncheon will be served, then the return to Moline.

*Wednesday afternoon*, a garden party at the home of Dr. and Mrs. P. H. Wessel.

In the evening, a movie, with special entertainment for the guests.

It is hoped that many of the ladies will attend the meeting, as the meeting is late and the season ideal for enjoyment in and around the Tri-Cities.

The Wednesday evening entertainment for the members of the Society will include a "Stag" at the Eagles Summer Home on Rock River, a fish buffet-lunch, with suitable entertainment. The plans in detail will not be given in advance of the meeting.

Col. D. M. King, the Commandant, invites the guests to visit the Government Arsenal and use its golf course, one of the finest in the country. The usual green's fee will be the only charge.

There will be a number of Alumni and Fraternity Banquets during the meeting. These will be announced on the bulletin boards.

Classes desiring to hold reunions during the meeting, should write to the Chairman of the Arrangement Committee, at Moline, to have suitable accommodations arranged for in advance.

#### PRESIDENT'S BANQUET

The annual President's banquet has been revived, and will be held at 6:00 P. M. on Wednesday evening. Special invitations have been sent to all past presidents of the Society and it is hoped that all of them will be present. The last past President, who presided at the 1926 annual meeting, will act as toastmaster at the banquet. All members of the Society are invited to attend the banquet and tickets at a nominal cost will be sold at the Registration desk as well as by members of the Committee an Arrangements.

#### TO VISITING PHYSICIANS

On account of the fact that Moline is practically on the State Line and several hundred physicians in Iowa are within a short distance of the Tri-Cities, a cordial invitation is extended to all Iowa physicians to attend the meeting. The ladies are likewise invited and it is hoped that many will avail themselves of the opportunity to visit our Society and enjoy the programs. We welcome you to Moline during the meeting.

#### GENERAL SESSIONS

*Tuesday Evening, May 31, 1927*

Elk's Club

(Open to the Public)

7:30—Call to order of the Society by the President, Mather Pfeiffenberger.

Invocation—Rev. Frank J. Day, M.A., D.D., Pastor First Congregational Church, Moline.

Address of Welcome—Hon. C. W. Sandstrom, Mayor of Moline.

Report of Chairman of Committee on Arrangements—A. T. Leipold, Moline.

Address—Robert McE. Schauffler, M.D., Kansas City. "Why You Need a Doctor When You Are Not Sick."

*Wednesday Afternoon, June 1, 1927*

Elk's Club

2:00—Oration in Medicine: "Insulin in the Treatment of Diabetes," Elliott P. Joslin, Clinical Professor of Medicine, Harvard University Medical School, Boston.

3:00 to 6:00—Joint Meeting of Sections on Medicine and Surgery for Teaching Clinics.

*Wednesday Evening, June 1, 1927*

7:30—President's Address—Mather Pfeifferberger, President, Illinois State Medical Society, Alton.

8:00—Oration in Surgery: "Liver Function," Charles H. Mayo, Rochester, Minnesota.

9:00—Entertainment for Members and Guests, given by the Rock Island County Medical Society.

*Thursday Afternoon, June 2, 1927*

1:30—Induction of the President-Elect, G. Henry Mundt, Chicago.

1:45—Report of the House of Delegates.

#### SECRETARIES' CONFERENCE

*Tuesday, May 31, 1927*

Elk's Club

Elizabeth R. Miner, *President*, Macomb.

J. W. Hamilton, *Vice-President*, Mt. Vernon.

W. J. Benner, *Secretary*, Anna.

10:00—Education and Organization—Wm. D. Chapman, Chairman of the Council, Silvis.

10:20—Our Greatest Debt—Edwin P. Sloan, Bloomington.

10:40—Work the Scientific Service Committee Has to Offer the County Secretary—W. S. Bougher, Secretary, Englewood Branch, Chicago Medical Society.

11:00—The Country Doctor's Problems—R. F. Lischer, Mascoutah.

Discussions by E. W. Fiegenbaum, Edwardsville, Harold Swanberg, Quincy; R. R. Ferguson, Chicago; Jas. H. Hutton, Chicago and others.

The annual banquet of County Society Secretaries will be held on Tuesday evening, May 31 at 6:00 o'clock. It is hoped that as many members of the Society as can possibly do so will attend the banquet. The Secretaries of the Branch Societies of the Chicago Medical Society are expected to participate in the transactions of the Secretaries Conference, as they are an integral part of the organization.

#### PERIODIC HEALTH EXAMINATION OF PHYSICIANS

Under the supervision of Dr. Jas. H. Hutton and Dr. H. P. Saunders, both of Chicago, a competent staff of examiners will give a thorough physical examination to all physicians applying

for the same. This will include a complete urinalysis and a Wassermann.

Five booths will be used so that more physicians can be examined during the meeting. The examiners have been carefully selected from Chicago and downstate, and each man will work only a half day of three hours.

It is a well known fact that the death rate among physicians is higher than in any other profession, consequently our program for periodic health examinations should include, first, the members of the medical profession.

Those who have not arranged for the examination previous to the date of the meeting should get in touch with Dr. Saunders or Dr. Hutton as soon as possible, as it will be possible to examine only a relatively small number of those attending the Session.

#### SECTION ON MEDICINE

Leroy H. Sloan, *Chairman*, Chicago.

J. L. Sherrick, *Secretary*, Monmouth.

*Tuesday Afternoon, May 31, 1927*

1:00—Some Pioneers in the Field of Obstetrical Antisepsis—Chas. B. Johnson, Champaign. Discussion opened by Edward H. Ochsner, Chicago.

1:30—Importance of Early Recognition of Peptic Ulcer—Lowell D. Snorf, Chicago.

1:50—The Healing of Peptic Ulcer—Karl L. Thorsgaard, Chicago. Discussion of both papers opened by A. A. Goldsmith, Chicago.

2:20—The Prostate as a Site for Focal Infection—James V. Beynon, Rockford. Discussion to be opened by Frank Deneen, Bloomington.

2:50—Newer Knowledge of the Etiology and Treatment of Pernicious Anemia (Illustrated with lantern slides)—Karl K. Koessler, Chicago. Discussion opened by LeRoy H. Sloan, Chicago.

3:10—Diabetic Coma—G. D. Hauberg, Moline. Discussion opened by J. C. Reddington, Galesburg.

3:40—The Relationship of Pregnancy to the Heart, Thyroid and to Diabetes and Tuberculosis—Phil. A. Daly, Chicago. Discussion to be opened by Elliott S. Denney, Aurora.

4:10—Upper Respiratory Infection With Associated Pulmonary Involvement in Childhood (Illustrated with lantern slides)—Borden S. Veeder, Clinical Professor of Pediatrics,



Washington University School of Medicine, St. Louis. (By invitation.) Discussion opened by Clifford G. Grulee, Chicago.

5:00—Angina Pectoris—Harry A. Durkin, Peoria. Discussion opened by Ralph McReynolds, Quincy.

*Wednesday Morning, June 1, 1927*

8:00—Functional Nervous Disorders, Their Nature and Management—Meyer Solomon, Chicago. Discussion opened by J. L. Sherrick, Monmouth.

8:30—Chorea—Jesse Gerstley, Chicago. Discussion opened by B. V. McClanahan, Galesburg.

9:00—Pulmonary Hemorrhage. (Illustrated with lantern slides.)—Herman H. Cole, Springfield. Discussion opened by R. T. Pettit, Ottawa.

9:30—Sanocrysin Treatment in Pulmonary Tuberculosis. (Illustrated by lantern slides.)—K. J. Henricksen, Chicago. Discussion opened by H. C. Sweany, Chicago.

10:00—The Mechanism and Etiology of Arterial Hypertension. (Illustrated with lantern slides.)—Ralph Major, Professor of Medicine, University of Kansas School of Medicine, Kansas City. (By invitation.) Discussion opened by Nathan S. Davis, III, Chicago, and Robert W. Keeton, Chicago.

10:50—Classification of the Nephritides—Warren Pearce, Quincy.

11:10—Newer Phases of Nephritis and Its Treatment—Jacob Meyer, Chicago. Discussion both papers by Jas. H. Hutton, Chicago.

11:40—Syphilis of the Vascular System. (Illustrated by lantern slides.)—Robert Berghoff, Chicago. Discussion opened by Chas. L. Mix, Chicago.

*Wednesday Afternoon, June 1, 1927*

3:00 to 6:00—Teaching Clinics, joint session of Sections on Medicine and Surgery. 1. General Medical Cases, Chas. L. Mix, Chicago; 2. Cases of Nephritis and Hypertension, Ralph Major, Kansas City, Mo.  
3. Pernicious Anemia, Bronchial Asthma and Unknown Fever, Karl Koessler, Chicago.

*Thursday Morning, June 2, 1927*

9:30—Otitis Media in Infancy—Gerald Cline, Bloomington. Discussion to be opened by Robert Graham, Aurora.

10:00—Knocks and Boosts of a Country Doctor—B. F. Lischer, Mascoutah.

10:30—Intracranial Injuries in the New Born—Ralph Kuhns, Chicago. General discussion.

11:00—The Management of the Asthmatic. (Illustrated with lantern slides.)—A. M. Feinberg, Chicago.

11:15—Some Unusual Cases of Protein Sensitization—F. J. Taub, Chicago. General discussion on both papers.

11:30—The County Tuberculosis Sanatorium as a Unit of the General Hospital. (Illustrated with lantern slides.)—C. M. Jack, Decatur. General discussion.

SECTION PROGRAMS

SECTION ON SURGERY

E. P. Coleman, *Chairman*, Canton.

J. R. Harger, *Secretary*, Chicago.

*Tuesday, May 31, 1927*

1:00—A Serviceable Abdominal Anus—Chas. J. Drueck, Chicago. Discussion opened by B. R. Winbigler, Alexis.

1:30—Gastric Carcinoma—Ben D. Baird, Galesburg. Discussion opened by G. De Takats, Chicago.

2:00—Surgical Treatment of Chronic Unilateral Pulmonary Tuberculosis—Carl A. Hedblom, Chicago. Discussion opened by Don W. Deal, Springfield.

2:30—Diagnosis and Treatment of Goiter—Wm. J. Carter, Mattoon. Discussion opened by J. B. Haeberlin, Chicago.

3:00—Carcinoma of the Thyroid Gland—John De J. Pemberton, Rochester, Minn. (By invitation.) Discussion to be opened by E. P. Sloan, Bloomington.

4:00—Injuries to the Mesentery, With Report of a Case—Carl E. Black, Jacksonville. Discussion opened by Marshall Davison, Chicago.

4:30—Diagnosis and Treatment of Chronic Duodenal Obstruction—Edwin W. Miller, Chicago. Discussion opened by C. U. Collins, Peoria.

5:00—Foreign Body in the Peritoneal Cavity—G. L. Armstrong, Taylorville.

*Wednesday, June 1, 1927*

8:00—Congenital Pyloric Stenosis—Albert H. Burr, Dixon. Discussion opened by Orville Barbour, Peoria.

8:30—Treatment of Varicose Veins—Edward

H. Ochsner, Chicago. Discussion opened by Edward H. Weld, Rockford.

9:00—Congenital Atresia of the Vagina Due to Imperforate Hymen—Mark S. Nelson, Canton. Discussion opened by Henry Schmitz, Chicago.

9:30—Fractures About the Elbow Joint—Philip H. Kreuscher, Chicago.

10:00—Intra and Juxtra Articular Fractures—Henry Bascom Thomas, Chicago.

10:30—Major Points in the Treatment of Common Fractures—Daniel Levinthal, Chicago. Discussion of fracture papers to be opened by Hugh E. Cooper, Peoria.

11:00—Personal Experiences in the Treatment of Defects by the Use of Flaps of Various Kinds—Wm. T. Coughlin, St. Louis. (By invitation.) Discussion opened by Hugh W. MacKechnie, Chicago.

#### *Wednesday Afternoon, June 1, 1927*

3:00 to 6:00—Teaching Clinics, Joint Session with the Section on Medicine. Surgical Clinics. 1. Gall Bladder or Upper Abdominal Conditions, Charles E. Humiston, Chicago; 2. Thyroid Conditions, Especially Associated with Diabetes, F. G. Dyas, Chicago; 3. Surgical Conditions of the Chest, Carl A. Hedblom, Chicago.

#### *Thursday Morning, June 2, 1927*

9:30—Clinical Experience With Meckel's Diverticulum—H. N. Rafferty, Robinson.

10:00—Primary Malignant Tumors of the Neck and Their Treatment with Radium—R. C. Crain, Chicago. Discussion opened by John Wolfer, Chicago.

10:30—Phrenectomy—Ralph B. Bettman, Chicago. Discussion opened by Earl D. Wise, Champaign.

11:00—Diagnosis and Treatment of Tumors of the Urinary Bladder—Budd C. Corbus, Chicago.

11:30—Analysis of End Results in Bladder Tumors Over a Period of Eight Years—Vincent J. O'Connor, Chicago. Discussion of both papers to be opened by Arthur Sprenger, Peoria.

#### SECTION ON EYE, EAR, NOSE AND THROAT

Louis Ostrom, *Chairman*, Rock Island.

C. F. Yerger, *Secretary*, Chicago.

#### *Tuesday, May 31, 1927, 1 P. M.*

##### A. DEMONSTRATIONS:

1. Audiometer and Audiograms—A. G. Peters, Chicago.

2. Displacement Irrigation; A Simple Technique for The Introduction of Fluids into the Paranasal Sinuses. Illustrated and Clinical—Arthur W. Proetz, St. Louis. (By invitation.)

##### B. TEACHING CLINICS.

"The Pitfalls in Eye, Ear, Nose and Throat Diagnosis."

##### 1. *Ophthalmic.*

a. Glaucoma—Harry Gradle, Chicago.

b. Sympathetic Uveitis—George F. Suker, Chicago.

c. Irido-cyclitis—Wm. L. Noble, Chicago.

d. Optic Nerve Lesions—Chas. G. Darling, Chicago.

##### 2. *Otitic.*

The Complications of Suppurative Middle Ear Disease—Harry Pollock, Chicago.

##### 3. *Rhinologic.*

Laryngoscopic, Bronchoscopic and Esophagoscopic—George W. Boot, Chicago.

##### C. THE BANQUET.

The annual banquet of the Section on Eye, Ear, Nose and Throat will be held at 6:30 P. M. at the Country Club. All those expecting to attend the banquet please get in touch with the Secretary of the Section.

#### *Wednesday, June 1, 1927*

1. Glaucoma Relieved by the Removal of Focal Infection—J. H. Roth, Kankakee. Discussion, G. S. Duntley, Macomb, and J. A. Ascher, Freeport.

2. The Non-Operative Treatment of Glaucoma—Harry Gradle, Chicago. Discussion, Harry Woodruff, Joliet, and M. H. Lebensohn, Chicago.

3. The Iridotomy Operation for Glaucoma; Some Deductions After Eight Years—Michael Goldenburg, Chicago. Discussion, Chas. G. Darling, Chicago, and Edw. F. Garraghan, Chicago.

4. Otologic Aids in the Localization of Brain Lesions—Norval Pierce, Chicago. Discussion, H. C. Ballenger, Chicago, and J. Sheldon Clark, Freeport.

5. Ophthalmic Aids in the Localization of Brain Lesions—George F. Suker, Chicago. Discussion, Walter Stevenson, Quincy, and O. C. Breitenbach, Waukegan.

6. Newer Methods in the Treatment of



Chronic Deafness—H. M. Thometz, Chicago. Discussion, H. R. Watkins, Bloomington, and O. J. Nothenberg, Chicago.

7. Physical Therapeutic Methods in Otolaryngology (Illustrated)—A. H. Hollender, Chicago. Discussion, F. L. Alloway, Champaign, and H. G. La Reau, Chicago.

8. Autohemotherapy in Sympathetic Uveitis—A. Vila Coro, Barcelona, Spain (by invitation). Discussion, Wm. A. Fisher, Chicago, and C. B. Voigt, Mattoon.

9. The Pros and Cons of the Various Steps in the Cataract Operation—Harry Woodruff, Joliet. Discussion, W. R. Fringer, Rockford, and Wm. A. Fisher, Chicago.

10. Accessory Nasal Sinus Disease in Children—A. A. Hayden, Chicago. Discussion, Albert H. Andrews, Chicago, and Frank J. Novak, Jr., Chicago.

11. The Choice of a Cataract Operation—Oscar B. Nugent, Chicago. Discussion, Harry Woodruff, Joliet, and Wm. A. Fisher, Chicago.

12. The Position of the Ophthalmologist in the Medical Profession—Robert Buck, Chicago. Discussion, C. B. Welton, Peoria, and Wm. L. Noble, Chicago.

13. Salivary Calculi—James E. Lebensohn, Chicago. Discussion, F. C. Strickling, Decatur, and F. W. Broderick, Sterling.

14. Retrobulbar Neuritis—James P. Fitzgerald, Chicago. Discussion, H. S. Lester, Streator, and T. J. Williams, Chicago.

15. The Auditory Tests With the Audiometer—G. Henry Mundt, and A. G. Peters, Chicago. Discussion, J. Holinger, Chicago, and Harry Pollock, Chicago.

16. Some Features in Bronchoscopy and Esophagoscopy—M. H. Winters, Galesburg. Discussion, Edwin McGinnis, Chicago, and Geo. W. Boot, Chicago.

#### SECTION ON PUBLIC HEALTH AND HYGIENE

H. V. Gould, chairman. Chicago.

A. A. Crooks, secretary. Peoria.

#### *Tuesday Morning, May 31, 1927*

10:00—The Necessary Foundation for the Health Movement—J. Howard Beard, Urbana. Discussion opened by William S. Keister, Decatur.

10:30—Recent Discoveries in Epidemiology—W. A. Evans, Chicago. Discussion opened by Isaac D. Rawlings, Springfield.

11:15—The Nomenclature and Classification

of Thyroid Disturbances and Their Relation to Iodine Therapy—James H. Hutton, Chicago. Discussion opened by H. V. Gould, Chicago.

#### *Tuesday Afternoon, May 31, 1927*

1:00—An Innovation in Recording of Vital Statistics for Health Departments—N. O. Gunderson, Rockford. Discussion opened by Arlington Ailes, La Salle.

1:30—Organization of a Whole Time County Health Unit—Herbert L. Wright, Chicago. Discussion opened by S. S. Winner, Chicago.

2:00—Organization and Maintenance of Municipal Health Departments—Arlington Ailes, La Salle. Discussion opened by R. V. Brokaw, Springfield.

2:30—The Coordination of Municipal Health Activities—Wm. S. Keister, Decatur. Discussion opened by J. J. McShane, Springfield.

3:00—Venereal Disease Control—Thomas Parran, Jr., Washington, D. C., Asst. Surgeon General, U. S. P. H. S. (by invitation). Discussion by Louis E. Schmidt, Chicago, and I. H. Neece, Decatur.

4:00—Present Methods of Scarlet Fever Control—George F. Dick, Chicago. Discussion opened by S. S. Winner, Chicago.

4:30—Tuberculosis Control—Robinson Bosworth, Rockford. Discussion opened by Robert H. Hayes, Chicago.

#### *Wednesday Morning, June 1, 1927*

8:00—The Relation of Industrial Medicine to the Private Practitioner—Frank L. Rector, Chicago. Discussion opened by Hart L. Fisher, Chicago.

8:30—The Relation of a State Child Hygiene Program to the Practitioner of Medicine—Grace S. Wightman, Springfield. Discussion opened by Orville Barbour, Peoria.

9:00—Proper Relationship between the State Department of Health and the Physician—C. S. Nelson, Springfield. Discussion opened by J. W. H. Pollard, Evanston, and L. R. Clary, Pekin.

9:30—Public Health Activities of the Medical Society of the State of New York, Relationship Which Should Exist Between Medical Men and Public Health Officers—James E. Sadlier, Poughkeepsie, New York, president, Medical Society of the State of New York (by invitation). Discussion opened by E. P. Sloan, Bloomington.

10:30—The Prevention of Measles—Some Results With the Use of Tunncliffe's Immune Goat

Serum—Archibald L. Hoyne, Chicago. Discussion opened by Louis J. Halpern, Chicago.

11:00—Immunities, Their Possibilities—J. W. Van Derslice, Oak Park. Discussion opened by J. C. Krafft, Chicago.

11:30—Food Poisoning—Lloyd Arnold, Chicago. Discussion opened by J. J. Moore, Chicago.

#### SECTION ON RADIOLOGY

*Tuesday, May 31, 1:00 P. M.*

1. Chairman's Address. E. S. Blaine, M. D., Chicago.

2. Lithopedians (by invitation). B. R. Kirklin, M. D., Rochester, Minn. Discussion opened by M. J. Hubeny, M. D., Chicago.

3. X-ray Study of the Effect of Distention of Stomach and Colon on Cardiac Dullness. W. A. Brams, M. D., and R. A. Arens, M. D., Chicago. Discussion opened by H. C. Kariher, M. D., Champaign.

4. Radiologic Study of the Pathologic Gall Bladder. P. B. Goodwin, M. D., Peoria. Discussion opened by B. R. Kirklin, M. D., Rochester, Minn., and R. A. Arens, M. D., Chicago.

5. Use of Iodized Oil in the X-ray Diagnosis of Pelvic Pathology. Julius Brams, M. D., Chicago. Discussion opened by Irving Stein, M. D., Chicago.

6. Value of the Fluoroscope in Surgical Manipulations. V. R. Stephens, M. D., Berwyn. Discussion opened by A. H. Parmalee, M. D., Oak Park.

7. Coordinating Radiology with Other Specialties. W. G. Bain, M. D., Springfield. Discussion opened by P. B. Goodwin, M. D., Peoria.

8. Jejuno-Cecal Fistula. E. A. Kraft, M. D., Danville. Discussion opened by C. R. Morgan, M. D., Mattoon.

There will be an informal get-together dinner of Radiologists at 6:00 P. M. at the Hotel Leclaire.

*Wednesday, June 1, 8:00 A. M.*

9. Treatment of Recurrent Carcinoma of Breast. B. H. Orndoff, M. D., Chicago. Discussion opened by Emil Beck, M. D., Chicago.

10. Importance of Accurate Dosage Measurements in Intensive X-ray Therapy. R. T. Pettit, M. D., Ottawa. Discussion opened by H. A. Chapin, M. D., Jacksonville.

11. The Care of the Cancer Patient. E. G. C. Williams, M. D., Danville. Discussion opened by R. T. Pettit, M. D., Ottawa.

12. Radium and X-ray Both Essential in

Therapy. T. D. Cantrell, M. D., Bloomington. Discussion opened by Henry Schmitz, M. D., Chicago.

13. Radium in the Treatment of Cancer of the Lip. F. E. Simpson, M. D., and R. E. Flesher, M. D., Chicago. Discussion opened by R. C. Crain, M. D., Chicago.

14. Uses and Misuses of Radium. C. W. Hanford, M. D., Chicago. Discussion on Radium papers opened by Harold Swanberg, M. D., Quincy, and O. W. Allison, M. D., Danville.

15. Diagnosis of Cancer of Esophagus (by invitation). Preston M. Hickey, M. D., Ann Arbor, Mich. Discussion opened by E. G. C. Williams, M. D., Danville.

16. Some Problems of the Roentgenologist in a Small Community. H. A. Elkins, M. D., Mt. Carmel. Discussion opened by W. M. Hartman, M. D., Macomb.

17. X-ray Diagnosis of Diseases of Heart and Aorta. Aaron Arkin, M. D., Chicago. Discussion opened by W. W. Hamburger, Chicago.

If this program cannot be completed by noon, it will be continued at 3:00 P. M.

#### RULES GOVERNING THE PRESENTATION OF PAPERS

All papers read by members shall be limited to twenty minutes and remarks in discussion to five minutes, floor privilege being allowed only once for the discussion of any one subject. All papers read before the Society or any of its Sections shall become the property of the Society. Each paper shall be deposited with the Secretary of the Section, when read, and the presentation of a paper to the Illinois State Medical Society shall be considered tantamount to the assurance on the part of the writer that such paper has not already appeared and shall not appear in medical print before it has been published in the ILLINOIS MEDICAL JOURNAL.

A paper not heard in its scheduled turn shall be held subject to the call of the Chairman of the Section at the end of that regular Session, if time permits, or as an alternative at the end of the program.

All discussions shall be confined strictly to the subject in hand.

No paper shall appear in the printed transactions of the meeting unless read in full or in abstract.

(From the By-laws of the Illinois State Medical Society.)



### COMMERCIAL EXHIBITS AT 1927 MEETING

We believe that this year we will have the best line of commercial exhibits that have ever been shown at a State Medical Society meeting. Each has been carefully selected, and only concerns that are entirely reliable and ethical have been invited to have an exhibit. We hope that all those present at the meeting will look over the entire line of exhibits, and get better acquainted with these reputable houses that have been interested in medical and surgical progress and have made no little contribution themselves to carry on the good work.

The American Medical Association exhibit will feature "Hygeia," their journal of individual and community health. This most commendable journal has rapidly come to the front as the leading health magazine of the country and it should be in the office of every practitioner of Illinois. An opportunity will be given those who are not already subscribers to "Hygeia" to join the subscription list and thereby show their interest in health and community problems.

Other publications of interest, from the press of the American Medical Association, will be exhibited and an opportunity given to those who have not yet become Fellows of the American Medical Association, to have their applications for Fellowship certified.

The Illinois State Medical Society urges its members to affiliate with the American Medical Association as active Fellows. The cost is only \$5.00 per year and this also includes a subscription to the Journal of the A. M. A., which is well worth the entire amount.

H. W. Grimm of Moline will exhibit a complete line of physicians' furniture as manufactured by the W. D. Allison Company of Indianapolis. This will include tables, chairs, cabinets, and other of the more popular types of office furniture. In addition to these, Mr. Grimm will display some X-ray supplies which will be of interest to those doing roentgenologic work.

The exhibit of the Victor X-ray Corporation will feature their line of physical therapy apparatus, including the new portable vario-frequency diathermy apparatus, with a capacity of 4,000 ma. over a selective frequency range of from 500 to 2,000 kilocycles; the Wantz multiple wave generator, for the production of galvanic, surgical galvanic and sinusoidal currents; the Sigmond galvanic controller; air and water cooled ultraviolet quartz lamps; phototherapy lamps and vibratory massage apparatus. A new portable x-ray outfit will also be shown. The trained representatives in charge of the Victor booths will cheerfully assist you in solving your technical problems involving either physical therapy or x-ray apparatus.

The Medical Protective Company will have their representatives in attendance in booth number 45 to answer any questions relative to its service and discuss any points relative to mal-practice insurance that cago will show the latest ideas in transillumination, may be propounded by its contract holders or those who are interested in this subject for any reason whatever. Mr. M. L. Allen of the Peoria office and Mr. A. B. Garber of the Chicago office will be in attendance.

Sutliff and Case Company of Peoria will exhibit a representative display of their line of pharmaceutical specialties and standard products of general interest to the medical profession. An extensive line of surgical instruments, medicine cases and bags and many other sundries used in medical and surgical work as well as in the various specialties will be shown.

H. G. Fischer & Company, Inc. of Chicago will exhibit in space number 20, a most complete line of physical therapy apparatus and electrodes; a distinctly new and extremely powerful diathermy cabinet, a tissue cutting apparatus, a low voltage and wave current generator which is remarkably smooth in action, and their latest radiant therapy lamp as well as quartz ultra-violet apparatus. This company believes its line of supplies and accessories is unexcelled anywhere. Some new electrodes will be shown for the first time at the meeting.

V. Mueller & Company of Chicago will show a representative line of instruments used by the general practitioner as well as the surgeon. Many specialties of their own design will be shown, many of which are used by the eye, ear, nose and throat men, genitourinary specialists, and the up-to-date men in general. OBSTETRICAL instruments such as are used at the Chicago Lying In Hospital will be exhibited and a catalog of these will be sent to all who request it. Other items to be exhibited are the improved model of their ether vapor vacuum apparatus, the Israel Carmody portable machine, a full line of non-rust instruments and needles, cystoscopes, etc., for G. U. work, including the electrodes designed by Corbus and O'Connor for treating gonorrhoea in the male and female by means of the diathermy current.

The Harrower Laboratory, Inc., Glendale, Calif., extends a cordial greeting to all in attendance at the meeting to visit their exhibit in space number 34. In addition to the regular pluriglandular formulas, a number of new standardized endocrine products will be featured; also a display of fresh glands, photographs showing the processes of manufacture, special literature on endocrine disturbances, etc. Those in charge of the exhibit will be entirely AT YOUR SERVICE.

Sharp & Smith, 65 East Lake street, Chicago, announce that they will show a complete line of the latest and most improved models of surgical instruments including many new items of interest and they hope those in attendance at the meeting will inspect their interesting exhibit. They consider it a pleasure to show the many articles contained in their exhibit and give this invitation to the members and guests to call and look them over while at the meeting.

The Cameron Surgical Specialty Company of Chidirect illumination, improved instrumentation, accurate diagnosis, simplified technique and cauterization. Trained diagnostic clinicians will demonstrate the practical application of Cameron's electro-diagnostic and operating equipment in all phases of major and minor diagnostic operative and therapeutic procedure.

Carlson Brothers, Inc., the house of office supplies and equipment of Moline, Ill., will have an interesting exhibit of office supplies of every sort. Card records

and loose leaf records for the physicians and hospitals, filing cases for cards, letters, etc., sanitary metal cupboards, lockers, waste-baskets, cupboards, fire-proof safes, toys made in Moline-Buddly "L" Line-Hex-O-Blox, desks, wood and steel, chairs, costumers, book-cases, typewriters and many other articles of interest to the physician. The orthophonic victrola will be shown. A complete line of unique toys will be on exhibition and sold to those who desire them from the exhibit.

The Lavoris Chemical Company will have their display in space number 39. Most of the physicians in attendance at the meeting probably are acquainted with LAVORIS which has for its active principle the chloride of zinc, in pleasant form and permanent solution. It offers astringent, stimulating and tonic action in the treatment of inflamed or catarrhal conditions of the mucous membranes. Claims advanced for the preparation have been confirmed through extensive clinical observations. LAVORIS is presented entirely along ethical lines and its success bespeaks professional recognition. To all those calling at the LAVORIS exhibit will be given a liberal supply, or if preferred, it will be mailed after the meeting.

The Abbott Laboratories of North Chicago will exhibit their line of approved specialties and the products of the Dermatological Research Laboratories. Particular emphasis will be placed on amidoxyl, the new treatment for arthritis, calsoma, a neutralizing agent that corrects gastric acidity without producing alkalinity, ephedrine hydrochloride for the relief of asthma. A line of intravenous preparations will be shown, including the Dermatological Research Laboratories' bismarsen, a new organic compound for the treatment of syphilis, metaphen the powerful germicide, neoarsphenamine, the superior product of a reliable laboratory.

The Swan-Myers Company of Indianapolis will feature their pollen extracts. Through their well known botanist, Mr. O. C. Durham, this company has brought together one of the most diverse collections of pollens in the United States. With this especially varied assortment, they have arranged to supply individualistic treatment in the use of which the physician may prescribe the mixture of special pollens which seems to be indicated in the particular case. Other products featured are their 50 per cent dextrose ampoules used successfully in the treatment of vomiting of pregnancy, the infectious fevers and in other conditions where there is a low blood sugar. These ampoules were the first to be approved by the council on pharmacy and chemistry of the American Medical Association.

Hettinger Brothers Company, dealers in dental and surgical supplies, from St. Louis, will exhibit an interesting line of surgical instruments for the general practitioners, surgeons and specialists. Other interesting articles to be displayed are infrared treatment lamps and Victor vario-frequency diathermy apparatus.

Sanborn Company of Cambridge, Mass., will have an exhibit of diagnostic apparatus in booth number 38. The main feature will be the Sanborn basal metabolism equipment, which is ideally suited to either the private physician or large hospital and clinic.

Urologists will be greatly interested in the Sanborn-Rose cystometer, a device which has been developed by D. K. Rose of the Washington University Medical School at St. Louis. This device offers an entirely new method of diagnosing various bladder disorders.

The Cilkloid Company of Marshalltown, Ia., will exhibit both the perforated and impervious forms of "Cilkloid." The impervious form will be shown in both standard and double thicknesses. These are largely used for protective coverings over wet applications, ointments, to protect plaster casts, etc. The heavier material is often preferred on account of its greater strength. The perforated "Cilkloid" has been developed by this company to meet the long felt need for a dressing that does not adhere. While the perforations are large enough to provide for adequate air supply and drainage, they are not large enough to permit the forming granulations to grow through and cause trouble when the dressings are removed. The Cilkloid Company is anxious to have all those in attendance at the meeting visit their exhibit for a thorough examination of their helpful dressings.

Mead Johnson and Company of Evansville, Ind., are showing their line of Mead's infant diet materials, consisting of Mead's dextri-maltose, a carbohydrate to be added to cow's milk modifications; Mead's casein, a form of soluble protein to be added to dilute cow's milk for certain types of sick infants; Mead's standardized cod liver oil, the first biologically assayed cod liver oil to be placed at the disposal of the medical profession, and Mead's reconstituted milk. All of these infant diet materials are offered under the familiar Mead policy of advertising them only to members of the medical profession and of printing no feeding instructions on any of their trade packages.

E. R. Squibb & Sons extend a cordial invitation to physicians attending the meeting to visit their booth. The exhibit will include erysipelas antitoxin Squibb, Squibb authorized scarlet fever products, Squibb diphtheria products, insulin Squibb, Squibb arsphenamines and other Squibb biologicals, chemicals and pharmaceutical products. Squibb representatives will be in constant attendance to answer pertinent questions relative to the above or any other Squibb product. The exhibit will be at booth number 42.

The exhibit of Ciba Company, Inc., at the meeting will comprise the well known pharmaceutical specialties of the Society of Chemical Industry in Basle, Switzerland. Among these products are digifoline "Ciba," dial "Ciba," coramine "Ciba," lipiodine "Ciba," and other products which those who have used them will be glad to see at the meeting. The booklets issued by this company comprising the "Ciba" reference library which have had an unusually favorable reception by the medical profession will be available to those who call at the exhibit. All physicians visiting the exhibit will be given a booklet on the subject which they are interested in, or they will be mailed to your offices. The representatives of Ciba Company, Inc., in charge of the exhibit will be glad to furnish information regarding "Ciba" pharmaceutical specialties and supply an amount for trial to those desiring to test any of these products.



The Charles H. Phillips Company of New York will display their "Phillips" milk of magnesia, which identifies the original milk of magnesia symbolizing unvarying excellence and uniformity of quality. The merit of this product as the ideal laxative antacid is well established and has the endorsement of the medical profession. In addition to "Phillips" milk of magnesia, other dependable Phillips products will be shown. "Phillips" phospho-muriate quinine compound, a dependable reconstructive tonic, "Phillips" dental magnesia, a superior tooth paste based upon "Phillips" milk of magnesia will be on display at the meeting. All physicians present are requested to visit this booth, number 32, and investigate these products.

Mellin's Food Company, space number one. Appreciating that the real purpose in having exhibits as a part of the annual meeting of the Illinois State Medical Society is to give attending physicians an unusual opportunity to gain information of value, representatives of the Mellin's Food Company will make special effort to place before physicians all details relative to the materials from which Mellin's food is made, an outline of the process of its manufacture and definite information in regard to the amount and character of nutritive elements in the finished product.

The De Puy Manufacturing Company of Warsaw, Ind., takes great pride in the fact that they have a splint adapted to every type of fracture. One of the features of this company's exhibit will be the new combination leg splint made of aluminum, and a considerable number of new splints. Mr. W. D. Bates who represents the Illinois territory will be in charge of the exhibit.

Merrell-Soule Company of Syracuse, N. Y., will exhibit KLIM, Merrell-Soule powdered protein milk, Merrell-Soule powdered whole lactic acid milk and allied products which constitute its group of infant feeding products. KLIM will be served to visiting physicians that they may judge as to its flavor and the attendants will be glad to answer any questions regarding the scientific background and clinical success of each product.

The Physicians and Surgeons Adjusting Association of Kansas City will have representatives in booth number 10 to explain their methods of collecting old accounts, a feature which should appeal to all physicians present at the meeting. They will ask you to read their contract which contains no "jokers" and which everyone can readily interpret without any particular knowledge of law. Officials of the association will be present to greet their old friends and to make new ones.

In booths number 46 and 47 the HANOVIA CHEMICAL AND MANUFACTURING COMPANY of Newark, N. J., will exhibit, as usual, their entire quartz mercury anode type quartz lamps, the ALPINE SUN LAMP, the KROMAYER LAMP and the LUXOR model of the ALPINE SUN LAMP. Together with these they will have on display two different models of lamps, especially designed for particular needs, embodying certain refinements. Competent members of the Hanovia staff will be on hand to

demonstrate and explain in detail any of the lamps workings. A cordial welcome is extended to all physicians attending the meeting.

The Manhattan Coat Factory, 3223 North Halsted street, Chicago, will display a complete line of professional garments manufactured by themselves. Among these articles are office coats, operating gowns, interne's suits, operating suits, nurses uniforms, Manco prophylactic aprons and many other similar garments. Those in attendance will be interested in the many articles of wearing apparel made by this firm which are daily necessities for the physicians and nurses.

The preference for an emulsion of mineral oil for intestinal lubrication will undoubtedly create a great deal of interest in the PETROLAGAR exhibit. The Deshell Laboratories, Inc., will have some interesting material to demonstrate, in a graphic manner, why the emulsion of mineral oil and agar is superior as a lubricant to the plain oil. The representatives in charge of the Petrolagar exhibit will have important data on the clinical application of the various types of Petrolagar, their use in spastic and atonic constipation and in the modification of the SIPPY method of treating gastric ulcer.

HORLICK'S MALTED MILK CORPORATION, Racine, Wis., will occupy booth number 33 and will incorporate in its presentation of Horlick's products, a feature which will be received with enthusiasm by visiting members of the profession. It is announced that throughout the three days of the meeting, Horlick's malted milk (plain and chocolate flavored) will be served. Samples of the product and literature will be given out to those in attendance.

W. B. SAUNDERS' COMPANY will exhibit their entire line of some 250 titles. Of particular importance are a great number of new books and new editions, including Cecil's Text-Book of Medicine, Ford's Bacteriology, Wechsler's Clinical Neurology, Young's Practice of Urology, Rehfuess' Diagnosis and Treatment of Diseases of the Stomach, Wood and Boswell's Health Supervision and Inspection of Schools, the new Mayo Clinic Volume, Kolmer's Chemotherapy, Stokes' Clinical Syphilology, a rewritten edition of Griffith and Mitchell's Pediatrics, Morse's Pediatrics, Arny's Pharmacy and Sollmann's Pharmacology, both rewritten in accordance with the new Pharmacopeia 10th edition of Scudder's Fractures, 2nd edition of Steven's practice of Medicine. A complete line of new and revised books will be available for every practitioner regardless of his specialty or inclinations.

The Heidbrink Company of Minneapolis will exhibit their latest developments in gas-oxygen apparatus for anesthesia. Recent developments in this field render their exhibit particularly interesting since the apparatus shown will include devices for the administration of ethylene and carbon dioxide, two of the new gases that are coming into great prominence. The Heidbrink exhibit will be in charge of Mr. E. H. Clark, a competent anesthetist, who has successfully demonstrated the proper use of anesthetic gases to the hospitals in Chicago and surrounding territory.

A complete line of Nose and Throat Sprays,

Nebulizers, Steam Vaporizers, etc., for office use and prescription purposes will be displayed by the De Vilbiss Company of Toledo, Ohio. The exhibit will occupy space number 53 and will have experienced attendants to explain the virtue of each article contained in the exhibit. The company extends a cordial invitation to all attending the meeting to visit their exhibit and see their complete line of modern accessories.

The Wm. R. Warner Company will exhibit in space number 9 their preparations, "Agarol" and "Guiatonic." Agarol is the original Agar-Agar Mineral Oil emulsion used generally as a bowel corrective. It is a stable product, pleasant to take and without artificial flavoring, sugar, alkalis or alcohol. Guiatonic is being used successfully as a tonic reconstructive in depressed and debilitated conditions, and especially in bronchial and pulmonary conditions. Those visiting the exhibit will be given trial bottles of these preparations, or if preferred, they will be mailed to the office. Literature concerning them, or their formulae, will be discussed by capable attendants.

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#### COMMERCIAL EXHIBITORS AT THE STATE MEETING

Abbott Laboratories, North Chicago, Ill.

Cameron Surgical Specialty Company, 666 West Division St., Chicago.

Carlson Bros. Co., Inc., 1405 Fifth Ave., Moline, Ill.

Childs Drug Company, 223-233 West Erie St., Chicago.

Giba Company, Cedar and Washington Sts., New York City.

Cilkloid Company, The, Marshalltown, Iowa.

DePuy Mfg. Company, Warsaw, Ind.

Deshell Laboratories, 536 Lake Shore Drive, Chicago

De Vilbiss Company, Toledo, Ohio.

Fischer, H. G., & Co., 2333 Wabansia Ave., Chicago.

Grimm, H. W., Reliance Bldg., Moline, Ill.

Hanovia Chem. and Mfg. Co., Chestnut St. and N. J.

R. R. Ave., Newark, N. J.

Harrower Laboratory, The, 160 N. LaSalle St., Chicago.

Heidbrink Company, The, 2633 4th Ave. South, Minneapolis, Minn.

Hettinger Bros. Company, 315 No. 10th St., St. Louis, Mo.

Horlicks Malted Milk Corp., Racine, Wis.

Huston Brothers Company, 30 East Randolph St., Chicago.

Lavoris Chemical Co., 918 No. 3rd St., Minneapolis, Minn.

Manhattan Coat Factory, 3223 North Halsted St., Chicago.

Mead Johnson Company, Evansville, Ind.

Medical Protective Company, The, Ft. Wayne, Ind.

Mellins Food Company, 177 State St., Boston Mass.

Merrell-Soule Company, Syracuse, N. Y.

Mueller, V. & Co., Ogden Ave. and Honore Sts., Chicago.

Overland Electric Company, 5311 West 25th St., Chicago (Cicero Station).

Phillips, Chas. H., Co., 177 Hudson St., New York City.

Physicians and Surgeons Adjusting Assn., Railway Exchange Bldg., Kansas City, Mo.

Sanborn Company, 26 Lansdowne St., Cambridge-A-Mass.

Saunders Company, W. B., West Washington Square, Philadelphia, Pa.

Sharp & Smith, 65 East Lake St., Chicago.

Squibb, E. R., & Sons, 80 Beekman St., New York City. Attention L. H. Ashe.

Sutliff & Case Co., Peoria, Ill.

Swan Myers Company, Indianapolis, Ind.

Warner, Wm. R., Company, 404 So. 4th St., St. Louis, Mo.

Victor X-Ray Corporation, 2012 Jackson Blvd., Chicago.

#### A THOUSAND DOLLAR PRIZE FOR A NEW TUBERCULOSIS DISCOVERY

In a recent announcement Mr. Francis X. Busch, a member of the Board of Directors of the Municipal Tuberculosis Sanitarium, states that an anonymous donation of \$1,000 has been given to the Board of Directors of the Municipal Tuberculosis Sanitarium.

Mr. Busch states: "The object in view in granting the donation is that the thousand dollars be given to some physician, laboratory worker or scientist connected with tuberculosis work in Chicago, who develops during the year the



most useful discovery for the prevention or cure of tuberculosis. The man making the donation has requested very earnestly that his name be not made public.

"Recently," Mr. Busch continues, "I accompanied this gentleman on a tour of the grounds and buildings of the Municipal Tuberculosis Sanitarium. He was particularly struck with the laboratory. We have, perhaps, one of the best, if not the best tuberculosis laboratory in America. It is equipped with the most modern and effective apparatus available.

"In the laboratory we witnessed a scene of considerable activity. The laboratory workers, physicians, physiological chemists and undergraduate workers were busy at their various tasks. Some were making up 'media,' the material in which the germs grow; others were peering through the eye-piece of the microscope and examining cultures of tubercle bacilli. In another corner a physician was examining a cage of guinea pigs which had recently been inoculated with tuberculosis.

"The laboratory seemed a place apart, remote, distant from the busy workaday world. There were present a couple of European scientists who were conducting some exhaustive experiments.

"Our benefactor," Mr. Busch continues, "was very much impressed. It seemed to him that this was a noble work, a work of science that would possibly be productive of great good. He wished to know the salaries paid the busy scientists, and found that the pay was very mediocre indeed.

"The thousand dollars," Mr. Busch continues, "outside of the question of personal honor, will probably not come amiss to some worthy scientist. It is notorious nowadays that a scientist or professor receives pay very much less than his qualifications entitle him to. The award is, of course, not limited to workers connected with the Municipal Tuberculosis Sanitarium. Any physician, scientist or tuberculosis worker in Chicago is eligible. It is hoped that this donation will be the first of many for such a purpose.

"Every day we see prizes for non-essential or unimportant issues. The newspapers run contests and offer prizes for cross-word puzzles, movie star tabulations, last line rhymes and such contests. Usually the contest is in the nature of a 'brain-teaser,' productive of no good to the individual or to the community. Such prizes as this offered by our anonymous friend, serve a double purpose; they serve, in the first place, to stimulate

and enliven scientific research, and, in the second place, they serve in a small way to help compensate a scientist for work, the value of which can not be measured in dollars.

"The scientist who spends a lifetime in his laboratory is entitled occasionally to a little recognition, and it is hoped that the man who wins this thousand dollar prize will, at the same time, win recognition for himself and for his work.

"Mayor William E. Dever is much interested in this contest. He has always felt," Mr. Busch states, "a deep responsibility toward the victims of tuberculosis in the community. It was for this reason and in order to keep in close touch with the workings of the sanitarium, that he placed the corporation counsel on the Board of Directors. On November 1, 1926, the Mayor turned the first shovel-full of earth for the new half million dollar addition to the sanitarium and on that occasion expressed deep satisfaction at the progress being made in tuberculosis work in Chicago.

"I wish to make it very plain," Mr. Busch concludes, "that the offer is not open to laymen who have merely untried ideas on how to cure tuberculosis. It applies solely to the scientist, physician or laboratory worker."

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#### ILLINOIS STATE MEDICAL SOCIETY SPECIAL TRAIN TO A. M. A. MEETING OVER THE PENNSYLVANIA RAILROAD

##### RESERVATIONS BEING MADE NOW

Arrangements have been made with the Pennsylvania Railroad for the operation of special trains from Chicago to Washington for the annual A. M. A. Meeting to be held in Washington, May 16-20, 1927. Members of medical organizations west of Illinois have been invited to join the special train at Chicago and travel with the Illinois State Medical Society members to Washington. A great deal of interest is being evidenced in connection with the specials and reservations are now being made.

##### SPECIAL TRAIN SCHEDULES

Arrangements contemplate two special trains over the Pennsylvania Railroad. One leaving the new Union Station, Chicago, at 1:00 p.m., May 15; the other leaving the Union Station, Chicago, at 1:00 p. m., May 16. The specials will be exact counterparts of the well known Liberty Limited, the crack train of the Pennsylvania Railroad between Chicago and Washing-

ton, which makes the run in 19 travel-comfort hours.

#### OTHER SPECIAL SERVICE

For those who, despite their desire, cannot join the special trains and travel with the larger groups of physicians from Illinois and the west, arrangements have been made to provide special car service which will also provide the opportunity of enjoying the club atmosphere and convenience of the special train service.

In addition to the special trains announced above, special sleeping cars will be provided for members of the medical profession on dates and schedules shown below.

#### THE LIBERTY LIMITED

Lv. Chicago, 1:00 p.m. Ar. Washington 9:00 a.m.

May 14, 15, 16, 17, 18, the following morning. The Liberty Limited is equipped with the



The Capitol

most modern type of sleeping, club and observation cars, and dining car serving a seven-course table d'hôte dinner. The train's personnel includes barber-valet, train stenographer, and maid for the ladies.

#### PENNSYLVANIA LIMITED

Lv. Chicago 5:30 p.m. Ar. Washington 4:20 p.m.

May 14, 15, 16, 17, 18 the following morning.

The Pennsylvania Limited provides a daylight ride through the Allegheny Mountains, around the famous Horseshoe Curve, through beautiful bits of mountain scenery, Allegrippus Gorge, The

Pack Saddle, Lewistown Narrows, and other points of National interest.

#### REDUCED FARES

Reduced rate of fare and one-half for the round trip has been authorized for our trip to the A. M. A. Convention. When purchasing going tickets at regular one-way fare, be sure to obtain a Certificate from ticket agent to be presented at Convention Headquarters for validation. When validated, Certificates will be honored for purchase of return tickets at half fare. In Chicago and vicinity, tickets will be on sale and Certificates issued from May 12-18. Certificates will be validated at Convention Headquarters in Washington, May 16-20, and honored for purchase of return tickets to and including May 24. Members outside of Chicago should consult their local ticket agents regarding dates of sale and fares from their home station.

The one-way rail fare, Chicago to Washington, is \$27.78; round-trip convention fare, \$41.67.

Pullman fares, Chicago to Washington, surcharge included, are: Lower berth \$8.25; Upper \$6.60; Compartment \$23.25; Drawing-room \$30.

#### NEW YORK

Many of the doctors will desire to visit New York after the convention, and we wish to call attention to the splendid service the Pennsylvania Railroad offers from Washington to New York. Trains run practically every hour. Returning to Chicago frequent Limited trains leave New York daily. As you perhaps know, the Pennsylvania Railroad is the only railroad via Washington to arrive in New York proper, right in the midst of things. The Pennsylvania Station is at 32nd Street and Seventh Avenue, in the heart of New York's theatrical hotel and shopping district.

Side trip to New York may be made at slight additional expense. Side trip fares are as follows: Baltimore to New York \$6.70. New York to Harrisburg \$6.99.

You are of course aware that the privilege of reduced fares is extended to all physicians and their families.

#### MAKE RESERVATIONS EARLY

Reservations should be made as early as possible so that proper accommodations may be pro-



vided for all. Address your reservation request to Mr. W. E. Blachley, Division Passenger Agent, Pennsylvania Railroad, 524 Union Station, Chicago, or telephone Mr. C. M. Trueb, Passenger Representative, Central 7200, Local 357. Additional information will be gladly furnished on request.

"ON TO WASHINGTON"

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### A. M. A. POST-CONVENTION TRIP TO BERMUDA

Many physicians from Chicago and other sections of Illinois and adjoining states, have made tentative arrangements for a voyage to Bermuda, following the A. M. A. Convention, that will close May 20 in Washington, D. C. This group contemplates leaving Chicago on the Illinois Medical Association Special Train, over the Pennsylvania Railroad, May 15 or 16, or in other special equipment provided by this railroad on their regular trains May 14, 17 or 18.

Plans are to depart from Washington, immediately after the close of the Convention, leaving Washington on the morning of May 21. The remainder of that day as well as May 22, 23 and 24 will be passed in New York City. At noon May 24, passage will be taken for Bermuda, on one of the luxurious steamers of the Furness Bermuda Line. Forty-eight restful hours at sea, and two delightful days on the Island, sailing from Bermuda on May 28, docking in New York again on May 30, entrain for Chicago, arriving there May 31.

Bermuda Islands offer attractions to suit many tastes, which should appeal to members of the A. M. A. and their families. There are splendid 18 and 19-hole golf courses, and tennis courts. All sorts of water sports, including surf and smooth water bathing, fishing and varied types of boating and sailing, as well as horseback riding. The hotels are unexcelled, and every entertainment possible is available.

The estimated expense of this journey, including all necessary incidentals from Chicago and back to Chicago, with the exception of hotel accommodations and meals while attending the A. M. A. Convention in Washington, and meals while in New York, is placed at \$225.00 per person. Lower fares will apply from cities east of Chicago, while higher rates will govern from points west of Chicago, in accordance with rail fares.

Members who prefer to travel independently to the Convention can join our party at New York City on the day of sailing. The all expense rate from New York to New York is \$115.00 per person.

An additional week can be spent on the Island at an estimated expense of between \$60.00 and \$70.00 per person.

At these rates minimum accommodations are given on the steamer between New York and Bermuda. These are comfortable, but a higher type of accommodations can be had at the additional rate provided by the regulation tariff.

If you are interested in this special journey, for further details and information, communicate with the Cosmopolitan Tours Company, 53 W. Jackson Blvd., Chicago, Ill., as this organization has the matter in charge, and all arrangements should be made through its officials.

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### RECEPTION AT THE WHITE HOUSE IN CONNECTION WITH A. M. A. CONVENTION

The Local Committee of Arrangements at Washington announces a reception to Fellows and their wives by the President of the United States and Mrs. Coolidge in the South Grounds of the White House, Wednesday, May 18, at 12:30 p. m.

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### SUMMER CLINICS, CHICAGO MEDICAL SOCIETY, 1927

Announcements and schedules will soon be ready for the 1927 Summer Clinics of the Chicago Medical Society, supported by many of the largest hospitals in the city, among them being the Post Graduate Hospital, Chicago Memorial Hospital, University of Illinois College of Medicine, Cook County Hospital, Michael Reese Hospital, Mercy Hospital, Presbyterian Hospital, Jackson Park Hospital, St. Luke's Hospital, Ravenswood Hospital, Mount Sinai Hospital, Francis Willard Hospital, West Suburban Hospital, Evangelical Hospital, North Chicago Hospital, Chicago Lying-in-Hospital, St. Joseph Hospital, Alexian Brothers Hospital, Laboratory of Surgical Technique, Washington Park Hospital, Jackson Park Hospital, Chicago Municipal Tuberculosis Sanitarium, John B. Murphy Hospital. Several of our large laboratories have

also agreed to co-operate with us in this great work.

In 1926 we limited registrations to physicians living in Illinois, but our increased facilities make it possible to accommodate many more than last year. Registrations therefore will be open to physicians from other states and to as many as may be accommodated in the order of their registrations. Registration fee will be \$10 for each two weeks course, payable at time of registration, and a physician may register for only one course of two weeks.

Admission will be by card only, issued by the Chicago Medical Society and no registration card will be issued until registration fee is paid.

The first two weeks course will begin on Monday, June 13th, 1927, at 9 a. m., ending Friday, June 24th.

The second two weeks course will begin on Monday, June 27th at 9 a. m., ending Friday, July 8th.

This is an excellent opportunity for the medical men of the country to obtain real post graduate work in some of the best hospitals in the world, and from some of the best clinicians found anywhere.

Schedules will be sent to the 10,000 physicians in Illinois, and announcements will be sent to the American Medical Association, and the several state medical journals.

We will probably be unable to accommodate all those desiring this wonderful clinical course, so it behooves those in Chicago and Illinois to register early if they desire to take advantage of this year's summer clinics. Last year our registrations closed one week after the first announcement.

#### DOCTOR KROHN WRITES INTERESTING BOOK ON BORNEO JUNGLES

Dr. William O. Krohn of Chicago has written one of the most delightful and interesting books of travel that the year has brought forth. "In Borneo Jungles," or Among the Dyak Headhunters, is readable to the last degree. Dr. Krohn has been kindly considerate and has chosen a style that is intimate and easy to the tired mind. His army of facts he marshals so adroitly that one can take information wholesale without finding a single page of annoying dullness. The book narrates events and conditions—geographic, ethnological and statistical—as simply as one

comments about the weather in a ride down town on the "L." Dr. Krohn had planned a holiday and a rest among the Dyak headhunters and was commissioned by the Field Museum of Natural History to collect for this institution specimens. Dr. Krohn has set down many of the trivialities that other authors overlook and that yet in themselves are salient. Mrs. Carter Harrison possesses this same luring quality in her works of travel. The book is dedicated to the Circumnavigators Club of New York city. The Bobbs-Merrill Company is the publisher. Further, this is a book for the family library table. Honolulu, Japan, China and the Philippines are touched upon en voyage to Borneo.

Here is a sample of some of the interesting matter within its pages:

"There is one species of commercial transaction in which the Dyak has the edge on the Chinese trader. Usually the Chinaman takes advantage of the superstition of the humble Dyak, but here is one instance in which the tables are turned and the Dyak has full opportunity to take the Chinaman into camp because of the latter's superstitious belief in the magical medicinal properties of bezoar stones. The Chinese have their emissaries gather these 'stones' from all over the world. Bezoar stones belong to the 'aristocracy' of a Chinese doctor's heterogeneous collection of remedies. Medically a bezoar stone is an 'ultra' to the Chinaman as birds'-nest soup is gastronomically.

"Speaking generally, bezoar stones are concretions sometimes found in the stomach or intestines of ruminants and some other animals and consist of mineral salts such as lime and magnesium, formed about a nucleus of some foreign substance. Some contain hair or vegetable fiber. They are divided into three groups: the oriental from the wild goat of Persia and various antelopes; the occidental from the llamas of Peru and the German from the chamois. Of these three the oriental is regarded as having the highest medicinal value, but in no wise comparable to that attributed to those found in Borneo. Bezoar stones secured in Borneo are of two kinds:

"1. Those that are simply gallstones of a monkey. These are greenish brown in color and are accredited with the greatest medicinal virtues by the Chinese.

"2. Concretions that gather in an external wound of the porcupine. These, like the gall-



stones of the monkey, are of very light weight. They are of a brown color and taste like quinine.

"When a Dyak has a bezoar to dispose of he assumes a kingly attitude like unto that of an exclusive dealer in diamonds or pearls. He allows it to be noised about that he has one or more such 'priceless jewels' in his possession and leaves it to his fellow Dyaks to convey this information to the first Chinese trader that visits the kampong. It is beneath his new dignity to approach the Chinaman. The Chinaman must come to him, as he sits in kingly state before his apartment of the tribal lamin. In the transaction that is sure to follow the Dyak does not, like the Chinese or other orientals, haggle and dicker, but sets his one price, which he will not reduce in the slightest, regardless of all discussion and argument. The Chinaman simply must come to his terms. It is gratifying thus to see the Dyak, in selling bezoar stones, score one on that slant eyed trader. But eventually the Chinaman gets even, when, with a stock of tinselled ornaments and other baubles, he revisits the Dyak settlement just before a celebration of the Feast of the New Year."

#### THE SCIENTIFIC SERVICE COMMITTEE REPORTS PROGRESS

April 7—Dr. Don C. Sutton, of Chicago, addressed the Knox County Society, Galesburg, on the subject of "Upper Respiratory Infections."

Dr. Maurice L. Blatt of Chicago, on the same day, talked before the same society on "Prevention and Treatment of Heart Disease in Children."

April 14—Dr. James T. Gregory of Chicago talked before the Union County Society at Anna on "Gall Bladder Diseases." This was discussed by Dr. F. C. Murrah and Dr. Robert J. Hyslop, both of Herrin.

April 22—Dr. C. M. Jack of Decatur gave an illustrated talk before the Marion County Society at Centralia on "Cardiovascular Diseases." Dr. Jack was assisted by Dr. Dean Stanley, who gave the interpretations of the electro-cardiograms; Dr. Murfin of Centralia, who ran the lantern, and Dr. Keister made a short talk on "The Heart in Its Relation to Public Health."

April 26—Dr. Robert W. Keeton, University of Illinois, talked to the La Salle County Society at Ottawa on "The Management of Diabetes."

April 28—Dr. Don Deal of Springfield addressed the Iroquois County Society at Watseka on "The Acute Abdomen." Dr. S. E. Munson, Councilor of that district, visited the society on that date and discussed Dr. Deal's paper.

May 6—Dr. J. C. Krafft of Chicago will address the McHenry County Society at Woodstock on the subject of "Child Health." A representative from each of the women's clubs and the nurses have been invited to this meeting.

May 10—Dr. Robert W. Keeton of Chicago will appear before the Rock Island County Society on the subject of "Feeding the Sick in Acute Infections."

May 27.—Dr. E. P. Sloan of Bloomington will talk to the Marion County Society on "Goiter; Its Diagnosis and Treatment."

May 12—Dr. Lindon Seed, University of Illinois, will give an illustrated talk on "Diagnosis and Treatment of Goiter" before the Union County Society.

May 12—Dr. Henry B. Thomas of Chicago will talk to the Moultrie County Society and its guests on "Arthritis, Its Diagnosis and Treatment."

May 12—Dr. E. L. Cornell of Chicago will talk to the Bureau County Society at Princeton on "Hyperemesis and Other Toxemias of Pregnancy."

On the same date before the same society Dr. H. E. Irish of Chicago will give a talk on "Infant Feeding."

May 19—Dr. F. L. Heinemeyer of Rockford will talk to the Jo Daviess County Society on "Occiput Posterior and Its Proper Management."

The number of counties using this service continues to increase.

Respectfully yours,

JAMES H. HUTTON.

#### QUESTIONABLE LEADERSHIP

ABUSE OF MEDICAL PROFESSION BY ITS OWN MEMBERS SEEMS FAVORITE INDOOR PASTIME

Every day brings instances of physicians deliberately discrediting their own profession and the thousands of its members who labor unseasonably for the public health and welfare. This should be stopped. This abuse of the medical profession is not confined to the ears of the doctors. On the contrary, it is told to the world,

by every possible means of distribution that modern science and civilization afford.

Newspapers, periodicals and lectures before organizations and even the radio are called upon to serve as vehicles for what some members of the profession think of the way in which others practice. Unfortunately the truth is at a sad discount in the majority of these effusions. Every criticism directed against ethical medicine by a recognized reputable practitioner is not only a blow to scientific progress but it is a direct, forceful and most important aid to the work of every diabolical cult and quackery that the country houses.

Such action upon the part of men supposedly versed in ethical medicine defies analysis. Surely no man of sane mind would so deliberately and definitely ally himself with agencies that assail the very heart and soul of medical science and by so doing wreak havoc with the welfare of ailing and unsuspecting and ever credulous mankind.

The profession stands aghast year after year, when at conventions of sections of the parent body some men arise and with great declamatory skill set forth imaginary wrong-doings on the part of the profession, with a gusto that rivals the strength of the cave of the winds. Reported in the public press, sometimes accurately, sometimes inaccurately quoted by word of mouth with all the accumulations of the tale of the black crow, the result is enough to make the profession clamor for a perfect censorship or for eternal silence. The most recent attack against what the profession does or does not do is being made biweekly over the radio and in Chicago. The incalculable harm that this effects through the protean possibilities of the radio, picked up as is the Chicago broadcasting in the most remote and inaccessible districts even, is appalling to a man of conscience and knowledge.

To those who doubt the seriousness of the situation, a few specific instances may not be amiss. To refresh the memory of the rank and file let it be stated that:

Within the last few years it has become the habit, annually, at the conference of the American College of Surgeons, for one or more of the supposed satellites to practice self-exploitation through the tirade against the rank and file of the profession busied at carrying on while these

self-arrogated supermen are out making speeches that are spicy tidbits for the lay press.

One of the most recent offenses of these "Me und Gott" surgeons was the statement that in all the profession throughout the United States there is only an absurdly infinitesimal proportion of men capable of diagnosing for an operation and operating. If memory serves rightly the number cited who knew enough to diagnose and to operate was about six or seven. Of course the gentleman may not have been quite himself that day but so full up of classics and mythology that he had mixed the group of alleged super surgeons with the quality group that used to dwell on Olympus.

Nectar is nectar wherever it comes. Only the gods dare sip. And while it might be the part of Christian charity to suspect that the drinks of the gods are too heady for even supermen of science; there are a few practitioners in the country who are willing to accept even that excuse for the false, defamatory and inexcusable charge of lawbreaking and individual turpitude placed upon them recently by a leader who has proven unworthy of the banner that he carries. When a man rises above the censorship of those who are appointed to govern and to regulate and to translate into the language of the lay public, intimate facts about the profession to which they belong then indeed have evil days befallen those who trust him.

Here is an example: Recently this journal was informed by reliable authority that a member of the high official family of the A. M. A. Incorporated had in his annual commentary great abuse of his profession. He listed in his charge instances of operation after operation, done as part of the daily routine of doctors and surgeons all over the country, that he claimed were unnecessary and performed solely for the fee. As typical of all the others let it be cited that he said that over ninety percent of tonsillectomies were uncalled for and would not be done save for the money that was in it. All this objectionable language was deleted and not published in the official journal. Yet much of this deleted matter, together with a wholesale charge of division of fees found its way into the lay press.

Another instance of imaginary misdeeds is the statement by one of these self-crowned gods that annually one hundred women come to him



for malignancy of the breast that really is non-existent except in a mistaken diagnosis, with recommendation for an operation that is not indicated according to the facts. Yet this man claims the physicians of these women had insisted that they should submit to such an operation. Further the surgeon who makes this criticism adds that in his opinion those other doctors were going to operate on these women not so much for the sake of the cancer they did not have as for the money the doctors wanted.

We feel that the majority of physicians reading this cock-and-bull comment would consider this charge about the one hundred cancers annually a fit contribution to "Bughouse Fables" and its cartoonist. Contrast that statement with this story told by one of the world's great skin specialists. This man has in all probability the largest "referred practice" in the country. Commenting upon this cancer story this skin doctor said, "I have very few such cases. In fact I have an infinitesimal fraction of such cases come to me in a year, for confirmation of diagnosis. None of them that do come are cases in which I have even suspected that a question of the fee enters into the management of the case. Here is another phase. Misinterpreting the motive of physicians seems to be an obsession with some. We have just as much right to assume that the intentions were good as that they were evil.

All this abuse of the whole profession by a few of the profession, is not only anti-ethical but it reminds the sane and normal men of the antics of a small boy with a shot gun loose in a hospital filled with cardiac patients. The only persons who gain anything from these appallingly unjust accusations are the natural enemies of the truths and real merits of medical science—the quacks and the charlatans. Are these not enemies of society maiming and sending to beds of agony, or to premature deaths, thousands and thousands enough of citizens without being aided by physicians and surgeons who should know better? If what these men say is true, they should bring forth their proof and a wholesale disruption of the medical profession would be in order. Fortunately the medical profession is not as these traducers say, and since it is not,

they should be forced to keep silent or to deal in verities. Conditions cannot continue as they are. Already the damage done is almost irreparable.

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### THE INVITED GUESTS

The Society should be proud of the list of distinguished guests on the program this year. Each section is privileged to select two men from outside of Illinois to appear on the program as "invited guests."

At the opening meeting on Tuesday evening, May 31st, the principal address will be made by Dr. Robert Mc. E. Schauffler of Kansas City. This meeting will be open to the public and the subject of the address will be "Why You Need a Doctor When You Are Not Sick."

The Oration in medicine will be given by Dr. Elliott P. Joslin, from Harvard University Medical School, subject "Insulin in the Treatment of Diabetes."

The Oration in surgery will be given by Dr. Chas. H. Mayo, of Rochester, Minn., on the subject "Liver Function."

The section on medicine will have Dr. Borden S. Veeder, Clinical Professor of Pediatrics, Washington University Medical School, St. Louis and Dr. Ralph Major, Professor of Medicine, University of Kansas, Kansas City, on the program.

The surgical section will have Dr. John De J. Pemberton, of the Mayo Clinic, and Dr. William T. Coughlin, of St. Louis, as invited guests.

The eye, ear, nose and throat section will have Dr. A. Vila Coro, Barcelona, Spain, and Dr. Arthur W. Proetz, of St. Louis, on their program.

The section on public health and hygiene will have Dr. Thomas Parran, Jr., Assistant Surgeon General U.S.P.H.S., Washington, D. C., and Dr. James E. Sadlier, President of the New York State Medical Society, Poughkeepsie, N. Y.

The section on Radiology will have as their guests Dr. Preston M. Hickey, of Ann Arbor, Michigan, and B. R. Kirklin, of Rochester, Minnesota.

Several of the invited guests will take part in the clinical session to be given jointly by the sections on medicine and surgery, Wednesday afternoon, June 1st.

## Correspondence

### ALUMNI MEETING AT ANNUAL MEETING STATE SOCIETY

JEFFERSON MEDICAL COLLEGE ALUMNI MEETING

A dinner and smoker will be held at Moline, Illinois, at the annual meeting of the State Medical Society. The exact date will be announced later.

FRANK M. PHIFER, M. D.,  
Vice-President,  
Jefferson Alumni Association.

† W. Madison St.,  
Chicago, Ill.

### KEOKUK ALUMNI

Bloomington, Ill., Apr. 15, 1927.

To the Editor: The Alumni of the Keokuk Medical Colleges will hold its annual meeting this year at Keokuk, Iowa on June 9.

The mailing list of this organization is about one thousand. Dr. J. H. Chittum, of Wapello, Iowa, feels that some of the addresses are incorrect, and since a great many of the graduates are practicing in Illinois he has requested me to write you and ask if you will put notice of the Alumni meeting in the May issue of the ILLINOIS MEDICAL JOURNAL.

Thanking you for this courtesy and  
With appreciation  
I am,  
Fraternally,  
J. Whitefield Smith.

### FOUR THOUSAND BED HOSPITAL ON THE LAKE FRONT, CHICAGO, NOT NEEDED\*

April 8, 1927.

Mr. Edw. N. Hurley,  
Chicago.

Dear Mr. Hurley:

Your tentative proposal for a public health unit as a part of the Chicago Centennial in 1933 and the copy of your letter to Mayor Dever upon the same subject were referred for consideration to a special committee of the Chicago Medical Society. The committee has attempted to give it careful study. It appreciates the public spirit

and the altruism which suggested such a plan and it feels that it should take pride in the fact that, in considering plans for its celebration, such great emphasis has been placed upon the importance of public health and medicine.

In considering the proposal, there are several important matters which, in its opinion, need to be weighed.

There is apparently ground for uncertainty as to the pressing need for more hospital beds. The letter to you of Dr. Olin West, of which we append a copy, goes into this matter with some detail from the standpoint of the data which the American Medical Association has on the subject of hospital facilities in Chicago and, for comparison elsewhere; and we refer to this letter for details upon the subject.

We, at least, do not believe that there should be such a sudden and large expansion of public hospital accommodations in the city.

If there should be further additions to the public hospitals of Chicago now we believe it should not consist of one large hospital. Cook County is now suffering from an excessive concentration of its public hospital facilities in one place at the Cook County Hospital. There is great need for city—or county—maintained hospitals in the outlying parts of the city. This is especially true of the far south side—a great industrial district—where there are so many illnesses and accidents and which is at an impractical distance for proper service to many of its sick and injured in the Cook County Hospital. We believe it would be a great mistake to consider further public hospital facilities in one place in any part of the heart of the city. If there is to be any expansion it should be in the form of hospitals placed on the different sides of the city where they are now so much needed.

We think that the location of any public hospital on the Lake Front is undesirable because of its relative inaccessibility, particularly because it is at one side of the city.

Dr. West has taken up in his letter the difficulties of administration of a very large hospital. His views upon this subject are, we believe, generally accepted. We endorse them: in our opinion they are a conclusive argument against the establishment anywhere of so large a hospital as your plans contemplate.

The financial problems of such an institution

\*Copy of letter sent to Mr. Edward N. Hurley by Chicago Medical Society committee, regarding public health unit as part of the Chicago Centennial in 1933.



are not particularly for us to consider, but we would at least point out that they are very large.

The cost of such an institution is far more than the cost of building and equipment. To provide such a hospital as you contemplate, of 4,000 beds, would cost in building and equipment not less than twenty to twenty-five million dollars. The experience of other great teaching and research institutions indicates that it would require three times as much more in the form of endowment, or four or five million dollars annually in the form of income to maintain it and to man it adequately as a research and teaching institution.

If any such sum could be gotten, we believe it would be a calamity to use it in a central city hospital of this sort, when it could be used to so much better advantage to science and teaching, and to the community, in developing the facilities we now have, and in providing other institutions in the city in locations where they are so greatly needed.

We would suggest also that there are other very large difficulties aside from the financial ones in developing rapidly a great institution such as you have in mind. If you had this plant built you would still have the question of its medical personnel. Medical men of great reputation are successful men. They are usually in attractive positions and are difficult to move. To man such an institution with outstanding men would be the task of a generation; and would then be a matter of careful disinterested development and gradual evolution. A medical institution is no greater than the medical men who work in it, and it could not be hoped to collect in a few years for this hospital the outstanding men in the world that would be necessary to make Chicago medicine any greater in 1933 than it would be by the development of its present men and its present resources. We cannot conceive of any inducements, monetary or otherwise, that can be offered that would bring together, upon the opening of this institution—taking them from the desirable positions they now hold—a group of men of sufficient reputation and ability to make this institution one of the greatest in the world at its beginning, say in 1933.

We do not presume to say what those in charge of the university medical schools in Chicago can or cannot do, but it seems to us that they would

feel that, with the large commitments they have made for medical schools, they should keep their efforts centralized upon their present institutions, which are large enough to use all the energies and resources that they can devote to them. The investment now in these medical schools probably aggregates forty or fifty million dollars. Their ambitions and purposes are as large and as high as those of this contemplated institution. We do not believe it would add to the greatness of Chicago medicine to undertake to develop an additional similar—even if larger—institution, under the combined management of institutions already existing. If it should be undertaken, we do not believe that any combined management could be effective or successful. We know of no such institution under combined management in the world, and under the best possible conditions it would present difficulties in management. With municipal, state and private support all necessary for it, we believe any successful combined management would be impossible.

If such an institution were in existence it might be used for post-graduate teaching, but it would not be utilized by our present medical schools. Medical schools the world over find it necessary to have hospital teaching facilities immediately accessible to the school. This hospital would be too far from each of these schools to be utilizable successfully for their teaching purposes.

In conclusion, we feel that, aside from any consideration of the celebration of 1933, the thing that would most enhance the usefulness and reputation of Chicago as a research and teaching center, and, as a center for the treatment of disease, would be to utilize to the fullest the public hospital facilities that Chicago now has. The value of the Cook County Hospital, even under the obstacles of political management, under which it has labored since its foundation, is shown by the great number of distinguished physicians who have gotten their first practical experience in that hospital. Chicago would have one of the greatest opportunities for medical development that the world affords if the facilities for teaching and research which it has in the Cook County Hospital would be utilized in the wisest and most enlightened way that we now know. No larger institution is needed for that purpose. The correct thing

for the advancement of Chicago as a medical center would be to concentrate upon the development of our opportunities in Cook County Hospital and in the other public institutions. It would not only make enormously for medical progress and for the development of medicine in Chicago but it would in equal measure be to the benefit of the patients in these institutions, for where students are being studied for teaching and research patients get the most careful and most thorough attention.

The outlying hospitals that Chicago now needs and their maintenance, as well as an endowment for the full development of these new hospitals and of the present existing public institutions, could be provided for by half, or less, of the sum that would be required for the maintenance alone of the great institution that you have in mind.

These are some of the important objections that to our minds militate against the desirability of the plan that you suggest. We regret that because of them we feel that the plan is not a desirable one.

Very truly yours,

COMMITTEE:

(Signed) Frank Billings  
R. R. Ferguson  
M. L. Harris  
F. R. Morton  
Jeremiah H. Walsh  
Chas. J. Whalen  
Wm. Allen Pusey,  
Chairman.

### "THE NEED OF TEACHING MEDICAL ETHICS"

*To the Editor:*—At the Annual Congress on Medical Education, February 14, in an address on "The Need of Teaching Medical Ethics," printed in *THE JOURNAL*, February 26, Dr. Arthur Dean Bevan, the chairman, says:

This problem (the prescribing of alcohol) has become a serious one because, in the propaganda against prohibition, a well organized group in the profession, in spite of the liberality of the government in regard to the amount of whisky which the medical man can prescribe for patients, has taken the position that the amount should not be limited and the physician should be permitted to prescribe any amount which he deems necessary.

An then Dr. Bevan asks, "*Is this not a case for the application of sound medical ethics?*"

This, without much attempt at concealment, is apparently aimed against the Association for the Protection of Constitutional Rights and those associated in the effort to have declared unconstitutional section 7 of the Volstead Act, which prohibits the physician from prescribing to a patient—no matter how serious the ailment or what the trained judgment of the physician feels is needful for the patient—more than a pint of intoxicating liquor in any ten days. Even though the patient may be in need of a larger dosage not merely for the alleviation of pain but for the prolongation or even saving of life, there is no exception. The prohibition is absolute.

In view of the facts that follow—unless the author was wholly without knowledge of them—it may not be improper to ask whether it is not a case for "the application of sound professional ethics" that he has seen fit to condemn a proceeding as that only of the above Association, whereas it is in complete accord with the views of the American Medical Association itself.

For in 1924 the following resolution was adopted by the House of Delegates of the American Medical Association:

*Resolved*, That the House of Delegates of the American Medical Association expresses its disapproval of those portions of the National Prohibition Acts which interfere with the proper relation between the physician and his patient in prescribing alcohol medicinally; be it further

*Resolved*, That the House of Delegates of the American Medical Association instruct the Board of Trustees to use its best endeavor to have repealed such sections of the National Prohibition Acts as are in conflict with the above resolution and also use their best endeavor to have the Commissioner of Internal Revenue and the Prohibition Commissioner issue revised instruction on the use of the prescribing of alcoholic liquors for medicinal purposes by physicians.—Proceedings, House of Delegates, A. M. A., 1924, p. 37.

And again, in 1925, the following resolution was adopted by the House of Delegates:

*Resolved*, In view of the fact such portions of the Volstead Act and the amendatory acts may be declared unconstitutional, that, as a substitute therefore, regulations should be forthwith drafted by the Prohibition Department to the end that the present abuses may be abated, and existing prohibitions as to the practice of medicine removed; and that this Association use all means within its power looking to the preliminary approval of such regulations by the Prohibition Department and the Commissioner of Internal Revenue; and be it further

*Resolved*, That the Board of Trustees be directed to appoint a committee to cooperate with the Commissioner of Internal Revenue and the Secretary of the



Treasury in the formulation of such regulations as under the National Prohibition Act, as amended, as may be necessary to carry said act into effect so far as the medicinal use of liquor is concerned.—Proceedings, House of Delegates, A. M. A., 1925, pp. 34-35.

Pursuant to the resolution of 1925, the Board of Trustees appointed a committee to formulate the proposed regulations, and such regulations, duly approved by the Board of Trustees, were submitted to the Treasury Department.

Moreover, when the case of *Lambert v. Yellowley* came on for argument in the Supreme Court of the United States, the American Medical Association filed a brief as amicus curiae by William C. Woodward, secretary of the Bureau of Legal Medicine and Legislation, protesting uncompromisingly against this act of Congress in interfering with the practice of medicine by limiting the amount which a physician may prescribe for any one patient, to one pint of intoxicating liquor in any ten days.

This is called by Dr. Bevan a part of the propaganda against prohibition. If Dr. Bevan had informed himself of the facts or had really considered the meaning of the words he has used, he would have recognized the vicious twist which will be given to them by every opponent to the fulfilment of his life's work for the improvement of medical education. If a physician shall not determine what and how much of any therapeutic remedy he may give his patient, who shall? Shall the question of whether and how often a patient shall be vaccinated against smallpox be determined by the fanatic anti or by the physician? Dr. Bevan knows the answer and he knows that the true answer is applicable to the prescribing of whisky the same as to the giving of diphtheria anti-toxin or of the vaccine of cowpox. The real question at issue in this legal controversy is much broader than that involving the prescribing of alcoholic beverages for medicinal use. It is the important problem whether the state control of medical practice shall be usurped by the federal government. This has been removed from the courts by a five to four decision in the Supreme Court. The duty has been put squarely up to the medical profession, to compel Congress to modify the existing law and free that profession from the unwarranted and usurped congressional control of its trained judgment in the treatment of disease. Dr. Bevan is right in demanding that the subject of ethics is urgently needed as a part of the medical curriculum just

as it is needed as a part of all education of youth today. But it is extremely unfortunate to cloud this main question with prohibition propaganda and erroneous statements concerning a group of the profession, which makes up a large majority, and which believes that only such regulations should be placed on the prescribing of spirituous liquor as shall safeguard its employment as a therapeutic agent and prevent its diversion to beverage uses.

No further comment on or characterization of the address of Dr. Bevan is necessary than to bring to the attention of the medical profession the foregoing facts in the case, which in the judgment of fair-minded men must make it impossible to defend the assertion that "a well organized group in the profession," and not the American Medical Association itself, was responsible for the carrying on of the attack on section 7 of the Volstead Act in the presentation of the case of *Lambert v. Yellowley* before the Supreme Court.

SAMUEL W. LAMBERT, M. D., New York.  
J. A. M. A., April 23, 1927.

#### THE MEDICAL LEGISLATIVE SITUATION ACT AT SPRINGFIELD

Springfield, Ill., April 29, 1927.

To the Editor:

Due to the very excellent work of the members of the Chicago Medical Society it was impossible for the chiros to get their bill reported out favorably last Wednesday in the License and Miscellany Committee of the House. After over an hour's discussion by both the proponents and the opponents a sub-committee was appointed to inquire more thoroughly into the merits of the measure. This Committee was instructed to report back in another week.

As a rule bills submitted to Sub-committees this late in the session greatly enhance the chance of failure for such measure. The majority of the members of the above Committee are from Cook county, and I find practically all of them have been seen by members of the Medical Society, and there was a deluge of telegrams and letters of protest to these particular committeemen and a decided change in the atmosphere regarding bills of this type.

One of the earlier bulletins sent out by the Legislative Committee of the State Medical Soci-

ety predicted that in all probability the Chiropractors would win in the Committee inasmuch as the majority of the members of that Committee supported Chiropractic Legislation in the 1925 session.

I am enclosing a list of the bills now pending in which we are interested, and their status in the Legislature as at the close of the session April 28th.

J. R. NEAL,

Chairman Legislative Committee.

The following is the status as of April 28th of the various bills in which we are more or less interested:

Senate Bill 12—The School Nurses Bill—has been defeated.

Senate Bill 26—A Mosquito abatement measure, has passed the Senate and is now pending in the House. It is a good bill and should pass.

Senate Bill 36—The County Superintendent Bill, is now pending on third reading in the House, having passed the Senate.

Senate Bill 127—The Massage Bill is still struggling in Committee.

Senate Bill 131—An undesirable amendment of the Medical Practice Act—still in Committee.

Senate Bill 132—A Drugless Healer Bill—still in Committee.

Senate Bill 133—An undesirable amendment to the Medical Practice Act—still in Committee.

Senate Bill 143—A measure to build an insane asylum in Cook County—still in Committee.

Senate Bill 147—A Chiropractic bill—still in Committee.

Senate Bill 194—An Osteopathic Bill—still in Committee.

Senate Bill 196—A Drugless Healer Bill—still in Committee.

Senate Bill 216—Provides for physical examination in personal injury cases—still in Committee.

Senate Bill 245—An anti-pollution of lakes, streams, etc., still in Committee.

Senate Bill 271—A Sanitary Regulation Bill for lodging houses—still in Committee.

Senate Bill 272—A similar bill—still in Committee.

House Bill 24—Provides free medical examinations—still in Committee.

House Bill 48—An old age pension bill—defeated in the House yesterday as it was charged to be a pauperizing and a paternalistic measure. This was one of the Federation of Labor's trump cards in the entire session and is a forerunner as to what probably will happen to the Eight Hour Bill.

House Bill 61—Women's Eight Hour Bill. Note—(An amendment offered to exempt those in the occupation of the care of the sick was defeated on the floor of the House. It is the impression of your Chairman that the entire bill will fail.)

House Bill 118—To provide physical training in Public Schools—still in Committee.

House Bill 127—The Chiropractic Bill—still in Committee.

House Bill 128—A Chiropractic Bill—still in Committee—to be heard April 27th.

House Bill 131—A Chiropodists Bill. Note—(This bill was amended by your Committee so that it would not conflict with the Medical Practice Act, but yesterday the House almost killed the bill and the introducer, Mr. Curren, had to ask for further consideration to save the measure. After a procedure of this sort, it is very unlikely that the bill will even pass the House.)

House Bill 150—An Osteopathic Bill—defeated in Committee.

House Bill 151—An Osteopathic Bill—defeated in Committee.

House Bill 203—An insanity commission bill composed of doctors—still in Committee.

House Bill 220—A Chiropractic Bill—still in Committee. To be heard April 27th.

House Bill 288—The Moron Bill—still in Committee.

House Bill 289—A similar measure—still in Committee.

House Bill 295—An insanity commission bill, composed of Physicians—still in Committee.

House Bill 296—A Sanatologists Bill—still in Committee.

House Bill 297—Also a Sanatologists Bill—still in Committee.

House Bill 300—A Pure Food Bill designating saccharine as an adulterant—still in Committee.

House Bill 314—A Rabies Prevention Measure, now pending on second reading in the House.

House Bill 394—A Veterinarian Measure—still in Committee.

House Bill 395—A similar measure—still in Committee.

House Bill 400—Another Pure Food Bill—still in Committee.

House Bill 411—Provides ways and means for extending the privileges of the University of Illinois to Homeopathy, Sanatology, Osteopathy, Chiropractic, Naprapathy, and Naturopathy schools for teaching and demonstrating their methods in the act of healing, promotion of health, and prevention of disease. (Isn't that a "cookie" of a Bill?)

House Bill 412—A Pure Food Bill—still in Committee.

House Bill 424—Makes it unlawful to deny any person confined in any State institution (except insane asylums or other institutions where inmates are detained because of mental defects) the right of choice or method of treatment to be administered to them for the care or protection of their health. Still in Committee.

House Bill 425—Denies the Board of Health certain necessary privileges regarding contagion in Public Schools. Still in Committee.



The above list of bills gives you some idea of the mass of responsibility with which your Legislative Committee is charged. We are only asking at this time that pressure be brought on the members of the License and Miscellany Committee of the House to defeat the Chiropractic Bills next week.

Up to the present time there have been more than 450 bills introduced in the House and 300 in the Senate. Every one of these bills have to be read carefully by your Legislative Committee to ascertain as to whether they have any bearing on the Medical Practice Act or not.

The three different factions of the Chiropractors are now united and of course they will withdraw one or two of their measures and center on the one they believe to be the strongest.

So far there is no measure on the floor of either the House or Senate which we are actively opposing, but there is a danger of a dozen or more of the above bills being sent out of the Committees unless we make proper protest.

This office will keep you informed as to which bills need your active work.

We believe that the task is yours and we shall do everythings possible here in Springfield, but unless the field work is done and done thoroughly this week-end, we will be defeated.

J. R. NEAL,

Chairman Legislative Committee.

#### SOMETHING ELSE ON THE "NURSING PROBLEM"

The nurse problem—economic, educational and scope of activities—has been given serious study by a special committee of the Medical Society of New Jersey of which Dr. E. S. McSweeney is chairman.

And here is a summary of their recommendations:

"Basic simplified course of training of shorter duration, with provision for advanced training and training for special service.

"Group nursing by which the nurse's time is better used, with shorter hours and larger remuneration to her and lessened cost to patients.

"Hourly nursing with same objects.

"Intensive effort to properly and adequately develop training and use of other than most highly qualified nurses.

"Multiplication of professionally controlled non-commercial central registries.

"The only source of nurses, in the last analysis," the committee observes after summarizing their findings, "is young women who will voluntarily take up the work because all things considered it offers an attractive career or return in comparison with other opportunities.

"So long as there is no rapid fall in present-day money standards, the prospect of securing any large supply of nurses of minimum acceptable personality, education and training at sufficient reduction in present rates of pay to be of any consequence is nil under present conditions."

The American Medical Association now has a special committee at work studying the nursing situation. Dr. C. W. Waggoner, Toledo, and a member of the State Association council, is a member of that special committee.

O. J. M. J.

#### THE A. M. A. WASHINGTON SESSION RAILROAD RATES TO WASHINGTON

The passenger association throughout the United States and Canada have authorized a rate of one and one-half fares for the benefit of members of the American Medical Association and dependent members of their families who will attend the annual session at Washington. To have the benefit of a return rate of one-half fare, it will be necessary for each member to secure a *certificate* from the railroad ticket agent when he purchases his ticket to Washington. The *certificate* must be certified by the Secretary of the American Medical Association, which may be done at the Registration Bureau to be located in the Auditorium in Washington, and must then be validated by a representative of the railroads who will be on duty from 8:30 a. m. to 5:30 p. m., May 16 to 20. When the *certificate* is so certified and validated, it will entitle its holder to purchase a return ticket to his home, over the same route traveled to Washington, at one-half fare. If the ticket agent at the member's home station does not have the *certificate*, he will furnish information as to where it may be obtained.

The *certificate* is not a receipt for money paid for a ticket, nor will a receipt entitle its holder to secure a return trip ticket at a reduced rate. Be sure to ask the ticket agent for a *certificate*.

*Certificates*, properly certified and validated, will be honored for purchasing tickets for the return journey at one-half fare up to and including May 24, but will not be honored after that date. No refund of fare will be made on account of failure to present validated *certificate* when purchasing return ticket. The return ticket must be used over the same route as that traveled going to Washington. Return tickets issued at the reduced rate will not be good on any limited train on which such reduced fare transportation is not honored.

When you purchase your ticket to Washington, secure from the railroad ticket agent a *certificate*, which, when properly certified to and validated at the Registration Bureau in the Auditorium at Washington, will entitle you to purchase a return ticket to your home, over the same route traveled to Washington, at one-half the fare paid for your ticket to Washington.

*Be sure to ask your railroad ticket agent for a certificate when purchasing your ticket to Washington.*

# MAKE A. M. A. HOTEL RESERVATIONS EARLY

## HOTELS AT WASHINGTON, D. C.

Name and Address	Single		Double		Suite
	Without Bath	With Bath	Without Bath	With Bath	
Annapolis	....	\$3.00	....	\$4.50	.....
11th to 12th on H street	....	-3.50	....	-5.00	.....
Arlington	....	\$5.00	....	\$7.00	\$8.00-\$10.00
Vernon avenue at K & 15th streets	....	-6.00	....	-8.00	.....
Blackstone	....	....	....	\$3.00	.....
1016 17th street N. W.	....	....	....	-4.00	each person
Burlington	\$2.00	\$3.50	\$3.00	\$6.00	\$3.00 and up
1120 Vermont avenue	....	-4.00	....	-8.00	each person
Calro	\$2.00	\$2.50	\$3.00	\$4.00	\$6.00-\$10.00
1615 Q street	....	-2.50	....	-3.50	-6.00
Capitol Park	\$2.50	\$3.00	\$4.00	\$5.00	.....
North Capitol and E streets	....	-3.00	....	-5.00	-7.00
Chastleton	....	\$3.00	....	\$4.00	\$2.00 each
16th street at R street	....	-3.50	....	-5.00	person, 4 persons to suite of 2 rooms
Colonial	\$2.00	....	\$3.00-\$3.50	....	.....
15th and M streets	....	....	....	....	.....
Congress Hall	\$2.50	\$3.00	\$4.00	\$5.00	\$7.00
New Jersey Avenue near Capitol	....	-3.50	....	-7.00	.....
Continental	\$2.00	\$3.00	\$3.00	\$5.00	.....
North Capitol, between D and E streets	....	-2.50	....	-4.00	-7.00
De Sales Chambers for Men	(Quotes a flat rate of \$2.50 a man, double and triple.)				
1735 De Sales street	....	....	....	....	.....
Driscoll	\$1.50	\$3.50	\$3.00	\$6.00	.....
1st and B streets	....	-2.50	....	-4.50	.....
Ebbitt	....	\$3.00	....	\$5.00	.....
H street at 10th	....	....	....	-6.00	.....
Everett	\$2.00	....	\$4.00	....	.....
1730 H street N. W.	....	....	....	....	.....
Fairfax	....	....	....	....	\$4.00-\$5.00
Massachusetts avenue at 21st street	....	....	....	....	.....
Franklin Square	\$2.50	\$3.50	\$4.00	\$5.00	....
14th and K streets	....	....	....	-6.00	.....
Grace Dodge	\$2.50	\$3.00	\$4.00	\$5.50	\$12.00. Each
North Capitol and E streets (For women)	....	-3.00	....	-8.00	extra person, \$1.50
Grafton	\$2.50	\$3.50	\$4.00	\$5.00	.....
Connecticut avenue and De Sales street	....	-4.00	....	-6.00	-8.00
Hamilton	....	\$4.00	....	\$6.00	\$20.00
14th and K streets	....	-7.00	....	-10.00	.....
Harrington	\$3.00	\$3.50	\$4.00	\$5.00	.....
11th and E streets	....	and-up	....	-5.00	-8.00
Houston	....	\$2.50	....	\$2.50	.....
910 E street N. W.	....	-3.00	....	ea. person	.....
Lafayette	....	\$4.00	....	\$6.00	\$10.00-
16th and I streets	....	-5.00	....	-8.00	12.00
Lee House	....	\$3.50	....	\$6.00	\$12.00
15th and L streets	....	-6.00	....	-10.00	.....
Logan	\$2.00	\$3.00	\$3.00	\$4.00	.....
Iowa Circle	....	....	....	....	.....
Martinique	....	\$4.00	....	\$6.00	\$10.00-
1211 16th street	....	-6.00	....	-9.00	12.00
Mayflower	....	\$5.00	....	\$7.00	\$18.00-
Connecticut avenue	....	-12.00	....	-15.00	25.00
Meridan Mansions	....	\$3.00	....	\$4.00	\$7.00-9.00
Metropolitan	\$2.00	\$3.00	\$4.00	\$6.00	.....
615 Pennsylvania avenue	....	....	....	-7.00	.....
National	\$2.00	\$3.00	\$3.00	\$5.00	.....
6th street and Pennsylvania avenue	....	-2.50	....	-3.50	-6.00
Occidental	....	....	....	....	\$8.00 for 4 persons
Pennsylvania avenue	....	....	....	....	\$3.00 for 1 person;
Parkside	....	....	....	....	\$5.00-6.00 for 2 persons
1336 I street	....	....	....	....	.....
Portland	....	....	\$3.50	\$4.50	.....
Vermont avenue and 14th street	....	....	....	....	.....
Potomac	\$2.00	\$3.00	\$3.50	\$4.50	.....
New Jersey avenue and C street S. E.	....	....	and up and up	.....	.....
Powhatan	....	\$4.00	....	\$6.00	\$10.00-
18th street and Pennsylvania avenue	....	-5.00	....	-9.00	18.00
Raleigh	\$3.00	\$4.00	\$4.00	\$5.00	\$12.00-
12th street and Pennsylvania avenue	....	-4.00	....	-6.00	-10.00
Roosevelt	....	\$4.00	....	\$5.00	\$7.00-
10th and V streets	....	-6.00	....	-8.00	10.00
St. James	\$1.50	\$3.50	\$3.00	\$5.00	\$7.00-
6th street and Pennsylvania avenue	....	-3.00	....	-4.00	-5.50
.....	.....	.....	.....	.....	7.00

Name and Address	Single		Double		Suite
	Without Bath	With Bath	Without Bath	With Bath	
Stoneleigh Court	....	\$6.00	....	\$6.50	\$8.50
Connecticut avenue and L street (American Plan)	and up	and up	and up	and up	and up
Tilden Hall	....	\$3.00	....	\$4.00	.....
Connecticut avenue at Tilden	....	....	....	-5.00	.....
Wardman Park	....	\$5.00	....	\$8.00	\$13.00
Connecticut avenue and Woodley road	....	....	....	....	.....
Washington	....	\$5.00	....	\$8.00	\$20.00-
15th street and Pennsylvania avenue	....	....	....	....	30.00
Willard	\$3.00	\$5.00	\$5.00	\$7.00	\$18.00-
14th street and Pennsylvania avenue	and up	-8.00	and up	-15.00	22.00
Winston	\$2.00	\$2.50	\$3.50	\$4.50	\$2.50 and
1st street and Pennsylvania avenue	-2.50	-3.00	-4.50	-5.00	\$3.00 each person

## BATHTUB ONCE FORBIDDEN BY LAW IN AMERICA

In this day when the gleaming white or colored tub and the shower apparatus for hot and cold baths is as much a part of the home as the tables and chairs, it is interesting to note that the first bath tub of record in the United States was made in 1842 by Adam Thompson of Cincinnati, O.

Thompson's "contraption," as his skeptical neighbors called it, was of heavy mahogany, lined with sheet lead seven feet long and four feet wide. But the American authorities at first were suspicious of this new bathing idea. So much so that laws were passed to restrain its development.

### BATHING A CRIME

In 1845, Boston passed a law making bathing unlawful except when specially ordered for medical reasons.

Philadelphia already had on its books a law framed in 1843, which prohibited bathing between November 1 and March 15.

Virginia had gone on record by levying a tax of \$30 a year on every tub in the state.

But the new fad of bathing caught on in spite of the laws and in 1852 a plant was founded in Chicago, which later developed to be a great factor in the making and popularizing of bath and sanitary fixtures. This was the Crane Company.

### DUPLICATION OF BATHROOMS

So marked has sanitation progress been, that hotels are no longer alone in advertising: "Every room with a bath." Apartments, houses, public buildings, institutions, and even factories are now built with a larger number of bathrooms than ever before.

Even the small dwelling is installing "extra" bathrooms.

## FAIRY TALE FAILS

A little boy one evening, after he had been put to bed, began to cry pitifully. To soothe him, Mary, the maid, was sent upstairs. After a short lull, the crying broke out again with renewed vigor, and the youngster's father was instructed to investigate the trouble. "What's all this noise about, you young rascal?" he asked in mock anger. "Well, Mary said if I kept on crying a mouse with great big green eyes would come and sit on the end of my bed. I've kept on crying, but it hasn't come yet!"



## THE TANNIC-ACID TREATMENT OF SKIN BURNS

The severe toxic phenomena associated with burns of the skin have long been recognized, and have been the subject of extensive study. Several theories have been advanced as to the etiology of these toxic symptoms. The evidence of modern chemical and biologic study is practically conclusive that there are formed at the site of the burn toxic substances, the absorption of which is responsible for the typical constitutional reactions. These have been shown to be cleavage products of protein decomposition from the seared skin. In view of the fact that the danger from skin burns is due to the absorption of these toxic products, the basis for rational treatment should be the prevention of the absorption of these cleavage substances. One method of preventing the absorption of such toxins would be to precipitate them by the local application of some chemical, and thus render them incapable of absorption. Studies along this line of attack by Dr. Edward C. Davidson, in charge of the Division of Experimental Surgery in the Henry Ford Hospital, have brought out the fact that tannic acid is an excellent chemical to use for this purpose.

Dr. Davidson has published (*Surgery, Gynecology and Obstetrics*, Vol. xli, No. 2, August, 1925, pp. 202-221) his studies in a large series of burn cases, and the data and results presented seem to indicate that the application of tannic acid is of incalculable benefit in the treatment of skin burns. The most important effect is the precipitation of the toxins, rendering them incapable of absorption. This effect is at once evident by the clinical behavior of the patients, the relatively low temperature curve, the slight degree of blood concentration, the comparatively low level of the non-protein nitrogen of the blood, and finally the low mortality rate from primary toxemia, even though five of the cases presented showed burns involving considerably more than one-third of the total body service.

In addition to the almost total elimination of toxic symptoms, other very beneficial effects are obtained. There is almost immediate relief from pain. All dressings being removed in 12 to 24 hours and the affected parts thereafter kept free from covering, the patient is freed from the pain and annoyance of daily change of messy dressings. Secondary infection is almost entirely absent, because the closely adherent coagulated skin protects the unaffected layers. Finally, much less scar tissue develops during healing, because this same coagulated skin acts as a bridge under which the epithelium grows rapidly. In every respect, therefore, the studies presented by Dr. Davidson indicate that the application of tannic-acid solution is a remarkable improvement in the treatment of skin burns.

### METHOD OF PROCEDURE

The method finally adopted in the management of cases of burns may be described briefly as follows: As soon as the patient is seen, he is given a relatively large dose of morphine sulphate hypodermically (for an average adult,  $\frac{1}{4}$  grain) to alleviate the intense pain. The burned area is then covered with dry, sterile gauze

pads which are held in place by sterile gauze bandages. This dressing is then soaked with a 2.5 percent aqueous solution of tannic acid. It is essential that the tannic acid solution be made up fresh just before use, because it deteriorates upon standing, with the formation of the far less astringent gallic acid.

In order to prevent the deep caustic tissue injury found by Schutz to follow the application of concentrated tannic acid, small sections of the dressing have been opened for inspection at the end of twelve hours, eighteen hours, and again at the end of twenty-four hours. As soon as the part is found to have assumed a light brown color, all dressings are removed. In order to facilitate removal of the dressings without pain to the patient and without causing further trauma, it has been found desirable to wet the gauze with fresh tannic acid solution shortly before this is done. The wound is thereafter left exposed to the air, but is carefully protected from mechanical injury, chilling, and bacterial invasion by a suitable cradle draped with sterile linen. In the more serious cases, artificial heat has been supplied by placing within the cradle so prepared one or more ordinary electric light bulbs.

Burns about the eyes are treated by local application of 5 percent tannic acid ointment (made with equal parts of vaseline and lanolin as a base). This is not as efficacious as the solution, but the liquid cannot be used about the eyes because of the danger of its astringent action on the cornea.

One of the most essential features of the management of all burn cases is that of keeping up the fluid balance in the body. This is accomplished by forcing fluids by mouth, where possible, or by hypodermoclysis, or intravenous infusions, according to the special indications in each case. Blood transfusion has been employed in some of these cases apparently with favorable effects.

## DECEIVING HER

"Why, my dear," exclaimed the good friend on finding Mrs. Newed in a flood of tears, "what is the matter?"

The young wife wiped her eyes and tried to compose herself and be inhumanly calm. "Well," she began, with folded hands, "you know John is away for a week?"

"Yes, dear," helped the lady friend.

"Well," continued Margaret, "he writes to me regularly, and in his—his last letter he tells me he gets my photograph out and kisses it every day."

"But that is nothing for you to cry about!" exclaimed the good friend.

"Yes, it is," cried Margaret, the newly-wed, bursting into tears afresh. "Because—because I took my picture out of his bag before he left—just for a joke—and—and put one of mo-mo-mother's in its place!"—*Washington Times*.

## ESTIMATING BIRTH RATE

Patient: "What's the birth rate in this country, doctor?"

Dr. Childs: "Well, mine is \$50.00."

## Original Articles

### GALL BLADDER DISEASE FROM THE STANDPOINT OF THE SURGEON\*

DAVID C. STRAUS, M. D.

CHICAGO

Surgeons use the term "Gall Bladder Disease" to include cholecystitis without stones, cholecystitis with stones, and gall stones without infection of gall bladder. The treatment of gall bladder disease is essentially surgical. Medical management is of little avail except in preparing these patients for operation and seeing that proper dieting is maintained after operation. In early cases, medical treatment may very well be tried for two months or a little longer before the case is definitely surgical. The pre-operative preparation is important and may require two weeks or longer in some cases.

The surgeon clearly realizes and has largely been responsible for our appreciation of the fact that in gall bladder disease *the pathology is not limited to the gall bladder*.

In 1918 Graham published observations indicating that hepatitis is a constant accompaniment of cholecystitis, by demonstrating in histological examination of small pieces of liver removed at operation for cholecystitis, that in every case, there is leucocytic infiltration of the interlobular and periportal tissue and also around the small bile ducts. The constancy of this finding has been confirmed by many others. Judd finds that cholecystitis rarely exists without hepatitis, while McCarty and Arnold Jackson, in a study of 58 cases of cholecystitis found that 81% of the cases showed a chronic inflammation of the liver.

Probably in a majority of cases, cholecystitis is produced by a direct extension of inflammation from an inflamed liver, to the gall bladder by way of the lymphatics. That this is true is shown by routine examination of gall bladders removed at operation. The early and less severe cases, almost invariably, show most of the inflammation at the periphery of the gall bladder and the least in the mucous membrane. Because of the richness of the lymphatics and the direct connection between the lymphatics of the gall bladder and those of the liver immediately about it, the gall bladder may reinfect the liver and vice versa, producing a vicious circle. Removal of the gall bladder is the only means of preventing this.

2. Not all cases of cholecystitis are due to this lymphatic spread from infection in the liver. Some cases are doubtless due to hematogenous infection. The focus of infection may be anywhere in the body.

3. The fewest cases are due to infection of the mucosa first, either from infected bile reaching the gall bladder from the liver, or from ascending infection from the intestine reaching the gall bladder by way of the duodenum and common duct via the cystic duct. Some years ago this was believed to be the common mode of infection of the gall bladder—*today we know it is the rarest*, and that it is *decidedly exceptional*.

Today we recognize two modes of gall stone formation. According to the theory of Naunyn, and supported by the work of Rosenow, we recognize that stones can be formed as a result of infection of the gall-bladder, the so-called stone forming catarrh or cholecystitis. The primary focus of infection may be anywhere in the body and may reach the liver and gall bladder via the blood stream, the lymphatics or by direct extension. In recent years the importance of a diseased appendix as an etiological factor has become recognized. Infection from the appendix may reach the liver by way of the portal blood stream, by way of the general circulation, or by way of lymphatics. Recent experimental work has established the fact that there is a direct lymphatic route from the right lower quadrant of the abdomen to the region of the lesser curvature of the stomach or region of the head of the pancreas, and also, that there is a direct lymphatic channel between the gall bladder and the liver immediately adjacent to the gall bladder, and this area at the head of the pancreas. The history will often elicit the fact that the patient first suffered from typical appendiceal attacks alone, and later the symptoms of gall bladder disease followed. This is a strong argument against allowing any patient to carry a tender, irritable appendix. In obtaining the history and making the physical examination, one should never forget the appendix. I remove the appendix in over 50% of cases of cholecystitis, or find that it has been previously removed by some other surgeon.

The other mode of gall stone formation is metabolic or chemical and is associated with the name of Aschoff. This theory explains the formation of the pure cholesterin stones, and particularly the solitary stone which is found with-

\*Read before the Douglas Park Branch of the Chicago Medical Society, February 15, 1927.



out pre-existing infection in the gall bladder, as being due to precipitation of cholesterol present normally in the bile in solution. Michaud has shown that cholesterol is held in emulsion by the soaps and cholates which diminish surface tension as emulsion colloids. Excess of albumin or fat (as well as toxins from bacterial infection) may cause changes in these protective colloids resulting in sudden precipitation of cholesterol and stone formation. Cholesterol is found to be increased in amount in the blood during pregnancy and is temporarily increased in amount after a meal rich in fat. This explains why gall stones are so often encountered in fat patients, and in relation to pregnancy. The history should always bring out whether or not the patient has ever been pregnant, the relation of the onset of the symptoms to pregnancy, and overeating.

The existence of disease of the gall bladder is correctly diagnosed in the overwhelming majority of cases, and is one of the diseases in which the diagnosis is easy as a rule, when the picture is typical. In an occasional case the history and findings are less clear, and in these cases the diagnosis may be extremely difficult.

In the average case the *diagnosis* can usually be made from the *history* alone. The outstanding points in the history which suggest gall bladder disease are epigastric discomfort or pain, usually just to the right of the ensiform cartilage or just below the right costal margin, coming on almost immediately after eating, associated with frequent belching and a feeling of fullness soon after foodtaking. The patients often complain of a rush of saliva in the mouth. These symptoms are often described by the patient as "indigestion" and this is often all that causes the patient to consult his physician. Without wishing to discuss the entire subject of symptoms I do wish to emphasize the fact that women are affected four times as frequently as men, and that whereas whenever a man comes to us because of continued stomach symptoms or indigestion we should always think of a possible gastric ulcer, whenever a woman comes with similar complaints we must always think of possible gall bladder disease. *Most women suffering with "indigestion" have gall bladder disease and not disease of the stomach.* It is important to remember not only that it occurs in nearly 80% in women, but also that approximately 80% of these have borne children, and that they date their

first symptoms of the disease from a pregnancy or early puerperium.

Next to the history, the findings on physical examination rank a close second in making the diagnosis; especially tenderness over the gall bladder area. There is often tenderness over the appendix as well. *Soreness remaining after a gall bladder attack is characteristic.*

Laboratory examinations, including the x-ray, are of less value as a rule, though in certain cases the röntgenological findings are indisputable and absolute.

All of the liver function tests have been disappointing. The large factor of safety of the liver precludes the use of any functional test to detect minor disturbances of the organ.

Lyon's test, by means of the use of the duodenal tube and magnesium sulphate, has not been found to be sufficiently accurate to come into general diagnostic use.

Examination for latent jaundice, by means of the van den Bergh test or the Fouchet test, which Dr. Friedman and I developed a few years ago, are of some value in occasional cases.

Gastric analysis gives additional evidence, especially in cases of long standing. I do not mean to advocate the use of test meals to prove the presence of gall bladder disease, but where there is a question of diagnosis between it and gastric or duodenal ulcer, it is important to remember that hypo-acidity or achylia occurs in over 50% of cases of gall bladder disease.

The x-ray is by all means the most valuable laboratory diagnostic aid. Before operation I always have a complete gastro-intestinal röntgenological study, except, of course, in emergency cases. As a routine this includes flat plates of the gall bladder, without giving any dye, and fluoroscopic and film examination using the usual barium meal, to study the stomach and duodenum. It is common enough to find duodenal ulcer in patients with gall bladder disease. The reason for this is clear for there is a direct lymphatic connection between the gall bladder and the duodenum. The röntgenological evidence is often helpful; in some cases invaluable. The employment of cholecystography with the aid of the dye is essential in the minority of cases; in some cases it is of the greatest value, as I shall show in a few lantern slides. In 446 cases reported in the literature, the total correctness of diagnosis of pathological gall bladder by means

of cholecystography was 97.8%. (Graham-S. G. and Obst., Feb., 1927.)

*Treatment.* The treatment is purely surgical.

Medical treatment is of little avail and probably should not be continued for more than 2 months. The earlier cases are operated on, the more certain is complete recovery and freedom from symptoms to be expected. Cases operated on late, after changes have occurred, as adhesions, chronic pancreatitis, duodenal ulcer, appendicitis, etc., do not offer so good a chance for complete relief of symptoms.

The so-called non-surgical drainage of the gall bladder, Melzer-Lyon, has been disappointing both as a method of diagnosis and as a method of treatment, and there is little rational basis for its use. As a method of treatment it is not only non-surgical, but likewise non-medical for the following reasons. Approximately 60% of cases with symptoms have stones but we have no accurate means of determining the presence of stones, and in case stones are present, any form of medical treatment, and particularly the Melzer-Lyon method can not possibly be of value, and the latter method, granting for the sake of argument that it tends to empty the gall bladder, would theoretically favor the passage of a stone from the gall-bladder into the common duct, making a common duct operation necessary, with its additional danger. Ten per cent. of patients dying from gall bladder trouble die from carcinoma of the gall-bladder. Every carcinoma of the gall-bladder shows stones present. While there is some doubt as to whether the stones produce the carcinoma, or vice versa, it is fair to assume, by analogy with carcinoma elsewhere, resulting from chronic irritation, that stones are probably frequently the cause of carcinoma.

The routine preparation for operation should include pushing fluids and, in addition, the free administration of carbohydrates, with the idea of increasing the glycogen reserve. It has been definitely demonstrated that the glycogen reserve is intimately associated with liver protection and liver injury.

Every jaundiced patient should have his *blood coagulation-time* determined. The most satisfactory method of reducing the coagulation time to within normal limits, is by the administration of 5 cc. of a 10% solution of calcium chloride once a day for 3 successive days, immediately be-

fore operation. (Walters) I have never observed the slightest ill results from its use, and have had many striking reductions in coagulation time. In one case where the coagulation time was 17 minutes, it came down to 12 minutes after the first dose; to 7 minutes after the second, and 2.5 minutes after the third dose. However, even when the coagulation time has been reduced to within normal limits, patients who are deeply jaundiced may show a tendency to bleed post-operatively. In these cases, blood transfusion is definitely indicated and is perhaps our most valuable means of combating this complication.

*Operation.* Cholecystectomy is the only logical operation for the majority of patients unless the general condition or the local findings render this too dangerous, as for example in severely jaundiced patients, decompensated cardiac cases, angina pectoris, etc., or when there are very extensive adhesions. Heart cases are often improved after removal of the gall bladder. Diabetics, too, are often improved after cholecystectomy.

Whether the formation of gall-stones is due to precipitation of cholesterin or to infection of the walls of the gall-bladder, the only logical method of preventing a recurrence is to remove the gall-bladder. Even when the stone is formed by precipitation of cholesterin without associated infection, infection develops later as a rule. When infection is present, this is most marked in the deeper layers of the gall-bladder wall and cannot be eradicated by mere drainage of the gall-bladder. To drain an infected gall-bladder and leave the infected wall is much the same as draining an appendiceal abscess and leaving the appendix behind. When the condition of the patient is so grave that drainage of the gall-bladder is all that can be safely done at the original operation, it should be understood by both the physician and the patient that cholecystectomy should be performed when the patient's condition has improved sufficiently so that this may be safely done.

Gall-bladder surgery should not be undertaken except by a surgeon who is competent to do a cholecystectomy safely. In the hands of a competent surgeon cholecystectomy is just as safe an operation as cholecystostomy. A patient who has had a cholecystostomy performed very frequently later requires cholecystectomy and these cases of



secondary cholecystectomy as a rule are more difficult than is primary cholecystectomy, chiefly due to adhesions. Certainly a cholecystostomy with a secondary later cholecystectomy carries with it a higher mortality than primary cholecystectomy.

When a patient is seen in the midst of an acute gall-bladder attack and especially if the patient be very toxic, it is often desirable to observe his progress with the idea of waiting for the acuteness of the symptoms to subside and operate in the interval, before a subsequent acute attack occurs. However, when this course is pursued it is essential to watch the patient's condition carefully so that if the condition becomes more serious he can be operated upon immediately. The two potential dangers in delaying operation, which must be constantly borne in mind are acute pancreatitis and gangrene of the gall-bladder with rupture.

*Technic.* Ordinarily I prefer ethylene anesthesia for gall-bladder operations. With the patient lying on his back on an operating table equipped with a gall-bladder elevator, the patient is anesthetized and then the elevator is raised. It is important to have a proper incision. In my experience the best exposure is secured by having the upper end of the incision as high up in the abdomen as possible and I prefer an incision which begins just to the right of the ensiform, carried downward and to the right obliquely until the inner border of the right rectus muscle is encountered, and then is continued in a vertical direction downward along the inner border of the rectus muscle as far as the level of the umbilicus. After the anterior border of the rectus sheath is incised the rectus muscle is drawn strongly to the right without cutting any of its fibers, in order not to damage its nerve supply. This guards against post-operative hernia. Then the posterior rectus sheath is incised together with the peritoneum, behind the inner third of the rectus muscle. The peritoneum now being opened, the liver presents in the incision as a rule as the liver is usually enlarged and extends below the costal margin. A flexible copper retractor, which has previously been bent at an acute angle, is placed in the lateral portion of the incision so that the portion of the blade within the abdomen lies between the anterior surface of the liver and the parietal peritoneum. A Kelly retractor is used to retract the medial border of the incision. This

is placed over a hot wet gauze sponge to hold the stomach well to the left, after having first examined the stomach and duodenum for possible pathology. Then a moist gauze sponge is placed in the lower middle portion of the field in order to hold the duodenum and transverse colon downward. This is accomplished by means of a Kehr retractor. It is of the utmost advantage to have adequate retraction. The gall bladder is now freed of any adhesions to it of omentum, duodenum or transverse colon by blunt or sharp dissection, controlling the hemorrhage by clamps or ligature. The fundus of the gall bladder is now grasped with a six inch curved Mayo forcep, placed in a direction parallel with the long axis of the gall bladder and so that the points of the forceps extend beyond the gall bladder, which is merely held in the curvature of the blades. The left index finger is now introduced into the foramen of Winslow and the common duct is palpated between the index finger and thumb to detect the presence of stone. Then the index finger is carried down behind the pancreas, which is similarly palpated between the index finger and thumb. It is important in every case to palpate the pancreas and that the record contain accurate information as to the condition of the pancreas at the time of the operation. A second six inch curved Mayo clamp is now applied so as to grasp the pelvis of the gall bladder in a manner similar to that in which the fundus was grasped. Then by means of a small scalpel, flaps of peritoneum are outlined along the two margins of the gall bladder near its attachment to the liver and these two flaps are reflected by blunt dissection by means of a curved Mayo scissor and the flaps are continued from the fundus to the middle of the cystic duct. The gall bladder is now dissected away from its liver bed by blunt dissection in a subserous manner beginning this dissection somewhere near the neck of the gall bladder, rather than near the fundus. This dissection is then continued downward until the cystic duct is well exposed in the ordinary case. If, however, dense adhesions are present, I often prefer to begin the dissection at the fundus to be sure to avoid any anomalies of the biliary ducts or vessels. The cystic duct should always be exposed by beginning the dissection at the gall bladder, continuing down the neck of the gall bladder and on to the cystic duct. If this is done, one does not have to fear anoma-

lies which otherwise might be the cause of serious damage. The common bile duct and the hepatic duct should always be plainly visible before the cystic duct is ligated and divided so as to be certain that one does not grasp or divide the common duct in place of the cystic duct. Having isolated and exposed plainly the cystic duct for its entire length, it is now doubly clamped, the proximal clamp is then removed (this should be about a quarter of an inch or more from the common duct) and a ligature of No. 1 chromic catgut is tied in this crushed area. Of late I have ligated the cystic duct doubly, applying a second ligature between the first one and the common duct, but placing it close to the first ligature. One does not have to be concerned about anomalies of the cystic artery because no matter from what portion of the arterial tree the cystic artery may arise, or if there are two cystic arteries, these always lie parallel to and along the cystic duct in this portion of its length. The cystic artery or arteries and the cystic duct are thus ligated together. The cystic duct is then divided between the distal ligature and the clamp, and the gall bladder is removed from the cystic duct to the fundus. If the peritoneal flaps have been thoroughly dissected away from the gall bladder and the removal of the gall bladder from its bed has been carried out subserously, little bleeding results, as the liver is not damaged. The two peritoneal flaps are now sutured beginning at the cystic duct and proceeding to the former site of the fundus of the gall bladder. A small rubber drainage tube is placed along the gall bladder bed down to the region of the foramen of Winslow. No other drain is used as a rule. Before closing the incision the appendix is examined if it can be easily drawn upward into the incision. Otherwise the appendix is palpated by inserting the hand down into the right lower quadrant. If the patient has had tenderness on pressure over the appendix, or other evidence of appendiceal involvement the appendix is removed, irrespective of the local findings. Unless the appendix can easily be brought up into the original incision, it is removed through a separate McBurney muscle-splitting incision in the usual manner. If a separate incision is used to remove the appendix, the gall bladder incision is closed first. Closure is made in layers up to the drain. The drain is held in place by tying it by means of one end of the silk suture used for closing the skin. It is

ordinarily removed at the end of 48 hours, unless there is drainage of bile at this time, which is exceptional. If bile drains out through the rubber tube, the drainage tube is not removed until this ceases.

The question of drainage or non-drainage has been the subject of a great deal of discussion during the last few years and opinion is still divided. The majority of surgeons today still feel that it is safer to drain and that the advantages of non-drainage are so trivial that they are greatly outweighed by the risk incurred in case there is much biliary discharge from the liver surface or from the stump of the cystic duct. I formerly closed a considerable number of cases without drainage, but of late have entirely given up doing so, as one simple case developed a biliary peritonitis. While there is no discharge of bile from the drainage tube in a great majority of cases, perhaps every twentieth case will show a copious discharge for a few days. Whenever this happens it is obvious that the drain is of great value. Moynihan in his 1926 edition on his two volume treatise on "Abdominal Operations" strongly emphasizes the fact that occasionally after a simple cholecystectomy he would be surprised to find the dressings saturated with bile. He therefore had a series of cadavers examined to discover the variations in the anatomy of the bile ducts, attention being focused on anomalies. This study was carried out by E. R. Flint and was reported in the *British Journal of Surgery*, 1923, Vol. 10, p. 509. Flint found that accessory ducts are present in 15% of cases. They are always on the right side, leaving the right lobe of the liver to join the common hepatic duct at any part of its course; at the junction of the right and left hepatic ducts, in the middle of the common hepatic duct, and in the angle of junction of the hepatic duct with the cystic duct. Accessory ducts vary in size, sometimes are extremely fine, sometimes as large as the right hepatic duct. They are often placed in close relationship with the cystic artery or duct. Moynihan points out that these findings have made matters plain; that they are probably wounded in not less than 80% of the cases in which they are present and he states that it is possible that they never escape injury during the operation of cholecystectomy. Their laceration or division accounts for the unexpected escape of bile from the wound after this operation. If this should happen, he says, it is



nardly worth while to repair the duct or to anastomose its cut end with the divided cystic duct. But it is essential that a drainage tube be left in the wound. Moynihan states emphatically that he no longer closes without drainage. I entirely agree with him.

If the abdomen has been opened with the expectation of finding gross pathology in the gall bladder, certain findings speak for pathological changes in the gall bladder. A gall bladder may be considered to be infected when it has lost its normal bluish color or its sheen; when it has lost its normal consistency and its walls are thickened by fibrous tissue. A deposit of fat, especially along the course of the blood vessels indicates pathology. Infection may also be shown by definite enlargement of the cystic gland. Adhesions to the gall-bladder of the omentum, duodenum or transverse colon are usually the result of infection of the gall bladder. Adhesions of the duodenum to the gall bladder may be found in cases of duodenal ulcer, but usually the primary seat of the infection is in a diseased gall bladder, and if an infected gall bladder is complicated by an associated duodenal ulcer, which is not infrequent, the pathology is primary as a rule in the gall bladder and the infection in the duodenum is secondary to it and is the result of lymphatic metastasis to the duodenum. Moderate enlargement of the liver, and particularly perihepatitis, strongly substantiate suspicion of infection of the gall bladder, especially when the thickening of the capsule and scars or adhesions are most marked immediately about the site of the gall bladder.

The common bile duct should be examined in every case. If it is enlarged definitely, this suggests the presence of a common duct stone, and even if no stone can be felt in the duct from without, every case of definitely enlarged common duct calls for opening of the duct with exploration for the possibility of a stone.

If the history has been typical of gall bladder disease and the gall bladder area was definitely tender on pressure and yet when the abdomen is opened and the gall bladder examined it appears normal, the question often arises as to whether it should be left intact, drained, or removed. It is my belief that it should be removed. One can not tell from mere inspection whether its walls are infected or not, as has been abundantly shown. Furthermore, my experience convinces

me that one may have before him a case presenting an abnormally sharp kink at the gall bladder neck and beginning of the cystic duct which is often not obvious until after such a gall-bladder has been removed.

If a stone is present in the common duct it is of course essential to remove it. If it can not be milked back into the supraduodenal portion of the common duct by means of the finger behind the common duct, its removal can be greatly facilitated by mobilizing the duodenum according to the method of Kocher, by incising the peritoneum parallel to and a finger's breadth to the right of the second portion of the duodenum, which is then turned forward and toward the median line, thus bringing the retroduodenal portion of the common duct into view, when, as a rule, an incision over the stone can be made. In case the retroduodenal portion of the common duct lies within the substance of the pancreas, this maneuver is of no avail. In such cases, or whenever a stone is impacted in the ampulla of Vater, it is necessary to do a transduodenal choledochotomy—that is, expose the ampulla by an incision through the anterior wall of the duodenum, and then open the terminal end of the common duct by splitting open the orifice of the ampulla from within the duodenum. I have always considered it safest and have carried out drainage of the common duct whenever I have incised it. I place a modified T-tube within the common duct and suture the walls snugly about the tube by means of a stitch or two above and below the tube, as interrupted Lembert stitches. I then place a gauze drain alongside of the tube down to the opening in the common duct. The gauze drain is removed at the end of 48 hours, but the T-tube is not removed for at least two or three weeks, often much longer in case the patient has been deeply jaundiced. By this time, when the tube is removed, a walled-off channel exists from the opening in the duct to the skin and there is no danger whatsoever of bile escaping into the free peritoneal cavity. In patients with common duct stone and with no stones in the gall-bladder, it is often wise to leave the gall-bladder in at the primary operation, merely relieving the patient of his jaundice and back pressure in the liver by removing the common duct stone. The gall-bladder can be removed much more safely at a second operation, when the patient is not jaundiced.

## PRELIMINARY REPORT ON THE THERAPEUTIC USE OF RADIUM SALTS\*

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Chemists have now made available a salt of radium, the chlorid, for therapeutic use. As a result of the knowledge obtained by my association with the late Dr. Julius H. Hoelscher, with whom I was closely associated for eighteen years, and who had kept well informed on radium therapy, I began the use of radium chlorid four years ago. At first it was administered orally or by baths, but during the past two and a half years I have also used an intravenous preparation of the chlorid. When I first attempted this method of treatment the intravenous preparations were not very satisfactory and an occasional bad result was obtained, such as nausea, abdominal pain and some diarrhea. Before discarding its intravenous use, however, I communicated with the laboratory that prepares the product, describing the symptoms which had occurred in a few cases. Within a few weeks I received a fresh supply of the preparation, with the assurance that there would be no recurrence of the unfavorable reactions. This proved to be true, for during the last year and a half I have given hundreds of injections and have not had a single bad reaction.

The beneficial effects from these salts are due principally to the alpha rays which they contain. The rays given off by radium can be demonstrated very plainly, as has been done, by placing a small metal object on a sensitive plate in a dark room, covering this with a piece of cotton and placing an ampule containing radium chlorid on top, allowing it to remain in place for forty-eight hours exposure. The clearness of the outline obtained will vary according to the strength of the solution. (Figs. 1 and 2). The rays can also be demonstrated by means of a spintherascope, an instrument composed of a small hand or needle, on the under surface of which is painted a small amount of radium sulphate. In a darkened room these tiny short rays can be clearly seen as thousands of minute bombardments.

Radium chlorid is prepared from the element radium. The heavy rays are no longer present

when released in a dilute solution, as in the chlorid. It is only when the alpha rays are confined that we get the beta and later the destructive gamma rays. The alpha rays when injected into the blood stream, or when taken orally, act as a cell activator. The dosage is accurately measured so that we know at all times the exact amount the patient is receiving.

The presence of the rays in the blood can be determined by the use of the electroscopic test. It has been found that twenty-seven seconds after an intravenous injection has been given, a drop of the patient's blood, from the toe for example, will discharge an electroscope.

Dr. Christian Fenger, in describing the therapeutic effect of the Roentgen-ray on malign-



Fig. 1  
5 Micrograms

Fig. 2  
10 Micrograms

nant cells, said that the rays do not destroy the malignant cells but stimulate the normal, healthy cells to activity, and that these normal cells kill the cancer cells. This may be the explanation of the effect of this form of radiant energy on systemic infections.

I have found the solution of radium chlorid to be very effective in systemic infections, such as are produced by certain streptococcus groups from infected teeth, tonsils, sinuses, genitourinary tracts, and so forth, and which have been shown by Billings, Rosenow and others to be responsible for the development of gastric and duodenal ulcers, endocarditis, myocarditis, neuritis, acute arthritis, cholecystitis and many other ills. I have treated many such patients and have found them to be symptom-free in from three to seven days, and apparently well in from six to

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ten weeks. Dr. Frank Billings was among the first to recognize the importance of foci of infection in systemic diseases.

The average dosage required to bring about the desired result has been from 100 to 300 micrograms, depending upon the severity of the infection. When given orally the patients receive  $\frac{1}{2}$  to  $1\frac{1}{2}$  micrograms or 10 to thirty minims in one or two ounces of distilled water, from two to four times daily, always on an empty stomach, and preferably one-half hour before eating. When necessary this dosage is reinforced by an intravenous injection of five or ten micrograms every five to seven days.

Radium chlorid is colorless and almost tasteless. The intravenous preparation is put up in normal salt solution in 2 c.c. ampules, so it is always ready for use. I prefer to use a 2 c.c. Luer syringe, with a 24 gauge,  $\frac{5}{8}$  platinum needle.

*Cardiovascular Disease.* Before prescribing this therapy for my patients with cardiovascular disease I first used the salt orally on myself, four years ago, for a myocarditis and markedly intermittent pulse which developed following influenza and sinusitis and had persisted for several months. The dyspnea and cough entirely disappeared and the pulse became regular in from six to eight weeks. My general health was greatly improved and I have not had the slightest return of the trouble.

Case 1. In November, 1924, a male patient, aged 80, who had always been very active, consulted me because he had recently become dyspneic and suffered from precordial pain which radiated down his left arm, and presented all the appearances of angina pectoris. The blood pressure was 220 systolic, 120 diastolic. The urine was negative. In addition to giving nitrites and benzol benzoate for a short time I immediately instituted the oral use of radium chlorid, in doses of three micrograms daily, and continued this for eight to ten weeks. The precordial pain and dyspnea gradually disappeared and at the end of ten weeks the patient was in good condition. The systolic pressure had dropped to 160, the diastolic to 90. The treatment was then discontinued. In the early spring of 1925 he went with his family for a trip around the world. Before leaving he was provided with some radium chlorid to take in case of necessity, but on his return three or four months later he reported that he had had no recurrence of his previous trouble, and had not taken the drops. I then placed him on this treatment for one month, as a prophylactic measure, and since that time he has remained perfectly well. He played golf during the summer of 1925, and in the winter of 1925-1926 visited South America with his family. He is now on another tour.

Case 2. Another interesting case was that of a woman, aged 52, who had suffered from cardiovascular disturbance for many months, complicated by hypertension and an occasional glycosuria. In July, 1926, she fell unconscious in the street, following a severe attack of precordial pain, and was taken to a hospital, where a diagnosis of angina pectoris was made by a diagnostician. The systolic pressure was 230, diastolic 120. She was kept quiet and given radium chlorid intravenously, ten micrograms every five to seven days, until she received 150 micrograms. Benzol benzoate and nitrites were also used for a few weeks. The pain disappeared within a short time and on October 6, 1926, the systolic pressure was 160, diastolic 90. On March 2, 1927, the systolic pressure was 170, diastolic 80. The patient feels and looks better than for many months previous to last July, and has experienced only slight symptoms on over-exertion.

An unusual feature of this case is the fact that a generalized psoriasis which had been present since her childhood has entirely cleared up since this therapy was begun. She had formerly received roentgenotherapy and other dermatologic treatment from well known specialists.

Case 3. A third case was that of a man, aged 72, a large, plethoric individual, whom I saw in October, 1924. Examination revealed hypertension, myocarditis and an intermittent pulse. The systolic pressure was 240, diastolic 120. He was markedly dyspneic on exertion and very apprehensive concerning his condition. He was given radium chlorid orally in doses of two micrograms three times daily over a period of twelve weeks, at which time his condition was so much improved that further treatment was unnecessary. The systolic pressure was then 180, and the diastolic 100. No other type of treatment was used. I have seen him at frequent intervals, the last occasion being October 15, 1926, when the systolic pressure was 160 and the diastolic 90. He has had no recurrence of the previous symptoms.

Case 4. A female, aged 68, had had glycosuria at intervals for two or three years and had been on a strict diet for that condition. Her blood pressure had been persistently high for three or four years, and when I saw her on October 25, 1926, the systolic pressure was 240, diastolic 120, with marked precordial pain and an anxious expression. She had taken nitrites in doses of 1/100 grain nitroglycerin as often as every twenty or thirty minutes for several doses, and in addition had received benzol benzoate. I administered ten micrograms of radium chlorid intravenously, and prescribed one microgram orally three times a day. The intravenous dose has been repeated at intervals of from five days to two weeks. After the third dose she was much improved, and has had little occasion to use the nitrites. On March 2, 1927, the systolic pressure was 180, diastolic 90.

Case 5. A male, aged 62, was first seen on December 27, 1926, after having been seized rather suddenly with dizziness and diplopia. He stated that his blood pressure had ranged from 180 to 220 systolic for the past six or seven years. He had also had an occasional

glycosuria, which improved under diet and which had not been checked up for several months. At this time his systolic pressure was 240, diastolic 120. The heart beat was regular, 100, with a marked accentuation of the second pulmonic sound. Otherwise, there was nothing unusual in the heart findings. His temperature was normal. The urine showed a specific gravity of 1015 and was negative for albumin. There was a large excess of indican, sugar, .85 per cent., urea 1 per cent. There were no casts and it was otherwise normal. Blood examination showed erythrocytes 4,250,000, leukocytes 7,600, hemoglobin 82 per cent. Both of these examinations were made by the Chicago Laboratory.

A purgative was given and a light diet prescribed. Ten micrograms of radium chlorid were administered intravenously at the time of the first visit. This dose was repeated every five to seven days, and in addition he received one microgram orally three times a day for the first month, then twice a day.

The dizziness and diplopia cleared up rapidly and he was soon able to return to his office for an hour or two each day. At the end of three weeks his pressure was reduced to 180 systolic, 80 diastolic, where it remained rather constantly until his infected teeth were removed, when his resistance was much increased. On March 7, 1927, his blood pressure systolic was 160, diastolic 70.

Since December 27, 1926, he has received 90 micrograms of radium chlorid intravenously and 150 micrograms orally. On March 4, 1927, a urinalysis by the Chicago Laboratory showed a specific gravity of 1017, urea 1.2 per cent., albumin, blood and bile negative, a small excess of indican, sugar 2 per cent. Acetone and diacetic acid were negative and there were no casts. At this time he was placed on a low carbohydrate diet. Blood examination by the same laboratory on the same day showed erythrocytes 4,200,000, leukocytes 9,400, hemoglobin 80 per cent. No nucleated red cells, parasites or degeneration forms.

No other form of therapy was used in this case. The patient states that he is feeling much better, has much greater endurance and is able to attend to his business every day.

In all cases of cardiovascular disorder that I have treated by this method when benzol benzoate and nitrites were used in the beginning of the treatment they have been withdrawn after ten days or two weeks.

*Gastric and Duodenal Ulcers.* I can report a series of five gastric and duodenal ulcers treated by this method, the diagnosis being verified by Dr. Maximilian Hubeny by means of the fluoroscope and Roentgen-ray.

Case 1. A male, aged 52, gave a history of gastric disturbance and epigastric pain and burning in the stomach for two or more years. He had received ulcer treatment for many months. On August 2, 1924, he had an attack of vomiting and gastric hemorrhage and was almost exsanguinated. Three hours later I administered radium chlorid both intravenously and orally. He was kept quiet and given nutrient enemas

for four or five days and then a milk and cream diet. Intravenous injections of ten micrograms were repeated at five to seven day intervals over a period of six weeks, and the oral administration of radium chlorid was continued for four months. After the sixth week he was allowed cereals and purees but was kept on a soft diet for three months.

A stool examination made by the Chicago Laboratory on August 23, 1924, was negative for blood. Blood examination by the same laboratory on August 22, 1924, showed erythrocytes 2,020,000, leukocytes 5,600, hemoglobin 47 per cent. On August 27 the erythrocytes were 2,060,000 and the hemoglobin 52 per cent. On September 20, the erythrocytes were 3,000,000, hemoglobin 58 per cent. October 28, erythrocytes 3,300,000, hemoglobin 62 per cent. November 24, erythrocytes 3,800,000, leukocytes 6,300, hemoglobin 60 per cent. February 6, 1925, erythrocytes 4,140,000, hemoglobin 78 per cent. June 6, erythrocytes 4,100,000, leukocytes 6,400, hemoglobin 84 per cent. October 22, 1926, erythrocytes 4,820,000, leukocytes 6,800, hemoglobin 88 per cent. The urine has remained normal throughout.

This patient has received no treatment of any kind since December 15, 1925, and has had no return of ulcer symptoms. His general health has been better during the past year than for many years previously.

Case 2. A male, aged 34, was seen February 12, 1925. He gave a history of epigastric pain, nausea, and a burning sensation in the stomach, which had persisted for several weeks. Examination of the stomach contents on February 14, 1925, by the Chicago Laboratory, gave the following result: Total acidity 96; free hydrochloric acid 40; organic acid and acid salts 16. Microscopic examination showed no blood or pus cells; a few organisms were present. Fluoroscopic and Roentgen-ray examination by Dr. Hubeny verified the diagnosis of duodenal ulcer. The patient was given radium chlorid both intravenously and orally over a period of eight weeks, receiving in all 200 micrograms. Four or five days after the treatment was instituted the acute pain and nausea had subsided. He was kept on a milk and cream diet for two weeks, after which cereals and other soft foods were added.

Case 3. A male, aged 46, was seen July 25, 1926. He gave a history of severe epigastric pain, nausea and burning. Fluoroscopic and Roentgen-ray examination by Dr. Hubeny revealed the presence of a duodenal ulcer and the patient was at once placed on radium chlorid intravenously and orally. A milk and cream diet was continued for two weeks, after which soft foods were permitted. At the end of ten days he was symptom-free, excepting for an occasional spasm, due to the accumulation of gas. Tincture of opium and belladonna were given to help control this. On October 30, 1926, he was in good condition and the treatment was discontinued, with the exception of a semisolid diet.

Case 4. A female, aged 22, was first seen on September 1, 1926. She gave a history of epigastric pain and slight nausea, which was relieved on taking food. Fluoroscopic and Roentgen-ray examination by Dr. Hubeny revealed the presence of a duodenal ulcer. No test meal was given. Blood examination by the Chi-



cago Laboratory showed erythrocytes 3,800,000, leukocytes 6,200, hemoglobin 78 per cent. The urine was negative. The patient was at once placed on radium chlorid therapy. One intravenous injection of ten micrograms was given and as she lived out of the City I prescribed one microgram orally four times daily. She continued a milk and cream diet for two weeks, at which time she was symptom-free. The oral use of radium chlorid was continued until November 15. She was advised to continue the milk and cream and soft food diet. She reported that she had no discomfort after the first two weeks and at the time of the last report, December 15, 1926, she was in good condition and had had no return of her former symptoms.

Case 5. A female, aged 42, was seen on September 29, 1926. She stated that she had been on ulcer management for the past year and a half, with frequent recurrences of the usual ulcer symptoms, and that they were worse at this time than ever before. Dr. Hubeny verified the diagnosis of duodenal ulcer by a fluoroscopic and Roentgen-ray examination. Blood examination by the Chicago Laboratory on September 29 showed erythrocytes 3,500,000, leukocytes 7,600, hemoglobin 72 per cent. Her weight was 109 pounds. Examination of the stomach contents by the same laboratory on October 2, 1926, showed a total acidity of 83; free hydrochloric 58; combined hydrochloric 17; organic and acid salts 8; occult blood negative. A few organisms were present, but no red blood or pus cells.

She was at once placed on radium chlorid by intravenous and oral administration, and a milk and cream diet. On the third day she discarded the use of her powders, for the first time in a year and a half. She received ten micrograms of the radium chlorid intravenously at five to seven day intervals, and one microgram orally four times daily. On October 14, 1926, her weight was 119 pounds. Blood examination by the Chicago Laboratory on that date showed that the erythrocytes had increased to 4,050,000, leukocytes 6,800, hemoglobin 82 per cent. At the end of two weeks the pint of cream was being taken daily was withdrawn from the diet, but milk was continued and a soft diet permitted. On October 29, 1926, the analysis of stomach contents by the same laboratory showed a total acidity of 68, free hydrochloric 45, combined hydrochloric 21, organic acid and acid salts 2. There were no blood or pus cells and the examination was negative for all bacilli. At this time I advised the removal of all infected teeth. The analysis of stomach contents was repeated on December 29, 1926, and revealed a total acidity of 62, free hydrochloric 36, combined hydrochloric 18, organic acid and acid salts 8.

Treatment was discontinued on December 1, 1926, and she has been on a regular diet since December 29, with no return of ulcer symptoms. She has gained fifteen pounds since the treatment began.

The first patient in this series was confined to bed for three weeks at the beginning of his treatment, but the other four were ambulatory during the entire period. In each of the five cases one or more infected teeth were found and removed

after the treatment had been discontinued, or was well advanced and the patient was in good condition.

The analgesic effect of radium chlorid is marked as has been well demonstrated in tabetic pains, infectious neuritis, lumbago and neuralgias. In several instances patients have been relieved of tabetic pains within four to six hours after the intravenous administration of five or ten micrograms. This dose is repeated in such cases at five to ten day intervals, as necessary.

*Acute Articular Rheumatism.* On January 15, 1925, I saw a woman, aged 70, who gave a history of acute articular rheumatism. She had been confined to her bed for five months, under the usual salicylate therapy. Both wrists and the left knee were badly swollen and supported on pillows. The temperature varied between 99° and 102° F. The urine contained a trace of albumin and a few hyalin and granular casts, but was otherwise negative. She was placed on radium chlorid therapy without delay. Ten micrograms were given intravenously every five days for six doses, and in addition she received one microgram three times daily for eight weeks, at which time the swelling, pain and temperature had entirely disappeared. By the end of the third week she was able to sit up in a chair. At the end of the eight week period she was apparently normal in every way, and has remained so. After the treatment was discontinued several infected roots of teeth were removed.

*Endocarditis and Articular Rheumatism.* A female, aged 24, who complained of recurrent attacks of acute arthritis and endocarditis of two years duration, was seen July 15, 1925. Her temperature varied from 98.6° to 101.5° F. There was tenderness to pressure and pain on motion in several of the joints, particularly the right knee. There was a marked systolic murmur over the apex, with precordial pain. Radium chlorid was administered intravenously in doses of ten micrograms, and radium baths were given every three or four days. The symptoms rapidly subsided and at the end of ten weeks all treatment was discontinued. Her general health is greatly improved and she has not experienced the slightest return of her old symptoms. Three months after discontinuing treatment she married and moved to the East, but I have kept informed as to her condition.

I have also used this treatment in many types

of arthritis deformans, together with radium baths, with the most gratifying results.

*Neurological Disorders.* An interesting case of another type was that of a man, aged 62. His previous history was unimportant, excepting for a gastroenterostomy which was performed fifteen years before because of an ulcer, which suggested an infectious etiology. He had been examined by a number of neurologists and his case had been diagnosed as psychasthenia or melancholia. He spent several months in a sanitarium, after which he went to a camp in Wisconsin, where he gained considerable weight but remained much depressed and apprehensive concerning his condition.

On his return to Chicago on September 10, 1926, I was at a loss to know what further to do for him, as reassurance proved of no avail. On October 10, 1926, he was given ten micrograms of radium chlorid intravenously, as an experimental measure, and instructed to return in five days. The injection was repeated at that time and after the second treatment he admitted to me and to his friends that he was feeling much better, which was the first time anyone had heard such a remark from him in many months. On November 1 he returned to his old position, from which he had been absent for a year and a half. Since that time he has received ten micrograms of radium chlorid every two or three weeks, and remains in good condition.

Another psychasthenic patient received very little benefit from fifty micrograms given during a period of four weeks.

#### SUMMARY

I have used radium chlorid in a variety of ailments during the past four years, with surprising and gratifying results. Many of the cases cited had resisted other types of treatment but responded promptly to this therapy. I have not observed a single bad effect in any of them. The treatment is simple to administer, apparently harmless in proper dosage, and the results obtained have been permanent.

From my experience I am convinced that this radiant energy is one of the most valuable therapeutic agents at our command, and doubtless the one upon which both animal and vegetable life is dependent for its existence. It does not inter-

fere with any other form of therapy that may be indicated, and opens up an important and interesting field for research.

25 East Washington Street.

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## CLINICAL CONFERENCES FOR SMALLER COMMUNITIES

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The article on "The Weekly Clinical Conference," by Dr. G. Henry Mundt, in the December issue, should arouse great interest. This comparatively new feature of continuous education of the medical man should be emphasized, and as repeatedly as possible. That it may be carried on successfully even in a smaller community is evident, since we have been holding these weekly conferences now for almost two years at Lake View Hospital.

In our conference the idea has been to give every medical man in the territory an opportunity to see all the interesting material in the hospital, showing him the pathological and roentgenological findings and discussing the diagnosis and indication for treatment.

It is a well known fact that for thorough average work one has to keep good records. In order to rise above the average one must constantly increase his knowledge and experience. To do this there is no better way than to go through the records again for further critical study, and for that purpose the weekly demonstrations and discussions are most ideal.

Then, we need variety once in a while in order to make these conferences more attractive. Demonstrations of new equipment, new technique, demonstration of patients, occasionally, as well as "special" clinics, such as gastro-intestinal, genito-urinary or chest conditions, will serve such special demand.

At the "special" conferences where the selected specific material, accumulated over years, can be demonstrated, we endeavor at the same time to give a compensation for the conventions which may not have been generally attended. Doctors, especially from the small country places, who



may not have heard much about certain diseases, but who express the desire for more information about them, are always referred to our weekly get-togethers. There they will hear, in course of time, all about rare conditions. And we are indeed glad when the township physicians are in our crowd for we feel then that we are decentralizing the university spirit by bringing the academic attitude to the country.

We are trying, and hope more and more to get the cooperation of neighboring hospitals and private laboratories. And as we strive for this good thing, the improving of ourselves by mutually benefiting each other, so does our progressive spirit grow and the smaller matters of our professional life drop away from us.

As to the formalities, much preparation, outside of the laboratories, is not necessary with the type of conference we are maintaining. Notifications posted in doctors' dressing rooms and personal communications will be sufficient to get a crowd. Brevity is important so that nobody shall get tired or lose unnecessary time. Beginning at a precise time and trying to cover the field in thirty to forty minutes will assure success.

We are aware that it is not sufficient to work intensively on cases only. We should study our literature conscientiously with an exchange of literary studies. And here we can fill in a gap. A limited, but not exclusive, cooperative and congenial crowd should gather monthly, spending an evening in a round table talk. With the host as leader of the program every member should give a brief critical review of at least one article he has read during the past month, an article which he has found interesting.

A short discussion in a very sociable way might follow the reviews. By spending no more than ten or fifteen minutes on one subject a wide field can be covered in one such evening. Here, too, may be reported interesting points, observed at recent conventions; also, the first reports of experimental and practical research, the discussion of which may cause a modification and improvement before publication of the new work.

These intimate gatherings will compel us to really study our medical journals by making notes from them. All too often we rush through the current literature being satisfied with the "Conclusions" of articles alone. Experience, however,

teaches us that such utilizing of journals is largely useless and lost time.

We may ask, why add new kinds of organizations when we are over-burdened by so many medical societies?

First of all there is little extra time taken. Even busy men frequently spend an hour's time talking or discussing with somebody in the hospital. They may just as well spend the thirty minutes for a conference. The round table arrangement, preferably in a doctor's home, is not only there for scientific talk, but materials, like eats and drinks, will play a role, too. This time is not taken away with the round table, because intimate social gatherings of physicians should be stimulated anyhow.

On second consideration there is no burden of societies at all. No membership fee, no election of officers, no informal or official announcements. Every minute is filled with something interesting when demonstrated or discussed by an acceding voice. No president will regulate discussions. And so we have a much better contact between the physicians.

What is the purpose of organizing medical clubs? To educate speakers or to get away from radio-bridge parties? Certainly; but the main idea, however, is to intensify our professional interest and to educate each other, that individually we may achieve a higher general perception. By getting greater things in mind we shall learn to range the little and less important factors. To say it shortly, our attitude and spirit will become that of a philosopher. Unpleasant and unworthy things will be forgotten. Thus the whole medical profession shall reach a higher level.

We are not inferior to the industrial magnates. Physicians do much for the progress of the world by keeping the mortality of the races down. The high cultural and financial classes will readily recognize our equal worth and give us the respect due the profession as we climb upward out of the dust of the past. The modern medical schools do their part. We must do the rest. The so-called weekly conference and the round table, which are of mutual benefit in every respect and do not serve any individual profitable purpose, are two of our best aids for the improvement of the ethical and cultural standing of the profession. Let us follow the good advice of Dr. Mundt and let us not give up our aspirations.

# THE EFFECT OF MEDICAL DIATHERMY ON THE RENAL EXCRETION OF UREA AND CHLORIDES

M. L. WEINSTEIN, M. D., AND J. KLEIN, M. D.

CHICAGO

The present popularity of physiotherapy makes it desirable to test its merits by exact methods. Diathermy is one of the most promising divisions of the physiotherapeutic efforts.

So far most of the pertinent American literature is of a clinical character dealing mainly with relief of various symptoms.

For an exact determination of the effect of diathermy the authors selected the kidneys because their function and its variations lend themselves readily to exact tests.

As control for the influence of diathermy on the renal function the determination of the quantitative output of urea and chlorides in the urine was employed.

Under normal conditions the amount of urea excreted varies in direct proportion to the protein ingested. The chlorides normally are produced at the rate of one per cent. of the gross weight of the urine excreted.

The following technique was used: A ureteral catheter was passed into the ureter of one kidney and a specimen of urine was collected for determination of the urea and chlorides before the diathermy treatment. Then diathermy was applied for twenty minutes using plate electrodes measuring 13x13 cm and using a current of 1500 milliamperes. The electrodes were covered with soap lather and then applied one posteriorly over the kidney region and one anteriorly at the same level. After the twenty minutes treatment another specimen of urine was obtained for chemical examination from the ureteral catheter which had remained in situ during the entire treatment.

In all there were five patients. Three had apparently normal kidneys. One was a case of acute pyelitis. The other was a case of chronic nephritis with marked hypertension. These cases were taken as they came along in the course of a general practice and at the time of testing were not on any particular regime except in the nephritic patient who had the usual low protein, salt free diet indicated in such cases.

Case	Diagnosis	Urea in Gms. per 100 c.c. urine			Chlorides in Gms. per 100 c.c. urine		
		Before Diath.	After Diath.	Increase	Before Diath.	After Diath.	Increase
1	Normal	0.410	0.470	0.06	0.14	0.25	0.11
2	Normal	0.2198	0.2666	0.0468	0.23	0.34	0.11
3	Normal	0.348	0.478	0.13	0.32	0.72	0.40
4	Pyelitis	0.28	0.30	0.02	0.40	0.50	0.10
5	Chr.Neph.	0.077	0.166	0.089	0.130	0.190	0.06

The chemical determinations were done by the Chemical Division of the Nelson Morris Institute for Research, Michael Reese Hospital.

The data show a definite increase in the excretion of both the chlorides and urea under the diathermic treatment. It is noted that in the nephritic with hypertension the excretion of urea was more than doubled after the diathermy treatment. The increase in the chlorides in this instance was not so marked probably because the patient was on a salt-poor diet. The increase in the urea excretion varies from 0.02 to 0.13 gm. of urea per 100 cc of urine. It is also seen that the increase in chloride excretion is more constant than the increase in urea.

The case of the nephritic deserves a detailed discussion. This concerns a nervous, highly strung woman of 50 who complains of headaches, bad taste in the mouth, coated tongue, bad breath and general malaise. Her blood pressure varied from 220 to 270 at different times. Routine examination of her urine show sp. gr., 1.005; albumin; no sugar, and microscopically there were to be seen some red cells and granular casts. The diagnosis was hypertension with chronic nephritis. One treatment of twenty minutes' duration with the above described technique more than doubled the urea output. On the day of the treatment she had a severe headache and a blood pressure of 220. On the day after the treatment without any special change in her regimen the blood pressure was reduced to 170 and the patient felt relieved of her bounding headache. However towards the end of the week the blood pressure had returned to 190 but the patient felt much better in general.

From the above data it may be seen that medical diathermy of the kidney is of distinct and definite benefit. It seems to produce its most pronounced results in the pathological case as above described. The mode of action no doubt is through the producing of an active arterial hypertension essential for an increase of diuresis. To quote from Kolischer and Jones<sup>1</sup>: "There is no



mysterious electrical influence brought to bear on the renal cells by diathermy; whatever benefits are obtained are due to the heat produced within the perirenal and renal structures by the resistance these parts offer to the high frequency current forced through them. . . . Medical diathermy is by no means a cureall or a specific for nephritis or nephrosis. It is simply a valuable aid and will furnish results in combination with other therapeutic aids such as removal of etiology foci, the proper dietary regimen, the administration of cardiacs and diuretics and if suggested by the prevailing conditions, nephrolysis and decapsulation."

The treatment may be administered in a hospital or in the physician's office as was done in this instance. The treatment if applied with due care to the preventing of burns by properly adjusted electrodes has no dangerous features. As to the frequency of the treatments a comparison may be made to the use of digitalis in cardiac insufficiency. No one expects one dose of digitalis to clear up a case of cardiac decompensation nor to restore a badly shattered heart to normal. Similarly with diathermy in kidney insufficiencies. The treatments should be given as often as necessary, not more than once a day and usually not longer than for a half hour or an hour under very careful supervision. No one expects that diathermy will perfectly restore a diseased kidney. However it is apt to improve considerably the renal function.

Indications for local medical diathermy of the kidneys as above described are nephritis with hypertension, toxemias of pregnancy, pyelitis, oliguria, and in short all instances where an increase of renal elimination is desirable.

29 E. Madison St.

1. Gustav Kolischer and Alfred Jones: *Medical Diathermy in Kidney Diseases*, J. A. M. A., Vol. 86, pp. 1606-1607, May 22, 1926.

### NEVER-TOLD FACTS\*

JOHN HUND, M. D.,

PEORIA, ILL.

About 25 years ago the celebrated Dr. Nicholas Senn made the statement: "Aseptic surgery has opened new fields and revolutionized general medicine. A few years later I read a paper before a Wisconsin County Society, when I had the audacity to reply: "Modern surgery has, to some

extent, demoralized the practice of Medicine!" I then made a few strong and pungent remarks, to wit: "Surgery is divided into two parts: the art, and the science of surgery. We have today, men who excel in the first part and those who excel in the second part."

Among those of the first part I mentioned Dr. Moses Gunn of the pre-aseptic era. And of those of the second part I pointed out Dr. Christian Fenger, whom I considered as standing upon a solitary height of the science of medicine and surgical pathology, and then I alluded to Dr. Nicholas Senn as the master in both branches of surgery and continuing I said:

"Besides these outstanding surgeons we have quite a number of mediocre ability and a still larger number of those who are not efficient or qualified to practice surgery. But they too operate, cut, slash, look wise, and charge well."

Many years had passed since. I had lost and almost forgotten the paper, when a few years ago my friend, Dr. Wm. B. Eichler, who at that time was a member of said society and heard me read it, handed me a copy, which he had preserved. I glanced over this document of my aggressive attitude of long ago, with a mixed feeling of approval and disapproval, satisfaction and dissatisfaction, and this verse forced itself upon my mind:

"Into life's ocean the youth with thousand masts  
daringly launches,  
Mute in a boat sav'd from wreck, enters the gray  
beard."

And then my thoughts carried me back to my lost paradise, my happy schooldays, and to the times of enchanting hopes, of golden dreams and then one of my first lessons in Latin came into my memory: "Tempora mutantur et nos mutamur in illis"—"The times change and we change with them," and I realized that the times have changed, indeed, and so had I.

So, if today, I am asked if the changes in surgery and general medicine have been, and are still for the better, I will answer unhesitatingly in the affirmative with a loud and sonorous "Yes." Modern surgery and general medicine is a great success in our profession and a great blessing for the whole suffering humanity, although I, myself, may drag far behind in the triumphant procession of progress.

If I were to talk to the laity I would enumer-

\*Read before Peoria Medical Society, Oct. 20, 1926.

ate some of the many achievements of our science.

But you, gentlemen, know them quite as well as I do. Hence, it would be like carrying owls to Athens to tire you with lengthy reports, records and statistics. Still I cannot refrain from alluding to a few striking attainments of modern medicine for our mutual consideration and our greater satisfaction and gratification. While I will not retract the statement I made 25 years ago as to the *status quo* at that time, I assert that our conditions have improved wonderfully.

For if we could count the competent surgeons of Chicago at that time, for instance, on the fingers of one hand we would have to take the fingers of both hands and the toes of both feet and then could not name them all, while the unskilled and unqualified operators have almost disappeared.

These happy conditions exist in all other medical centers, and even in cities of smaller size. And I am delighted to say that the physicians and surgeons of our city, Peoria, are near the top of this role of honor.

And I venture to say, with a slight touch of regret, that they would rise still higher if some of them would not occasionally stand in their own light, and thus for this and other reasons, lose the confidence of our people and the appreciation which they deserve.

While we admit that surgery has taken the lead in the onward march of progress we must not forget that the other fields of medicine have not been neglected, but also, have been assiduously fertilized and diligently cultivated. So if we sum up all the achievements, which have added 15 years to the average span of the human life, it would be difficult to single out a branch or a specialty, which would be entitled to the most credit.

We can, however, safely state that the indefatigable work of scientific research and investigation constitutes the foundation for the wonderful structure of the whole healing art, ever inspired by the old maxim:

"Non ratione sed experientia et experimentis morbi sanantur"—"Not by reasoning but through experience and experiments diseases are healed."

If we pay little attention and observe the human actor as he enters the stage of life and follow him to his final exit, we are struck by the

influences, services, and self-sacrifices, which the guardians of life, assisted by their faithful handmaids, the skilled nurses, render to his suffering and not always grateful fellowman.

But the most successful work is and has been done on the old principle: "An ounce of prevention is worth a pound of cure," upon which preventive medicine stands and inspires the whole practice of medicine in all its branches and various specialties. But as we know that a house is not finished with the building of the ground work, so we must know that our efforts and labor on the ground structure of medicine must go on unceasingly, and although we understand that our hopes and our dreams may never be fully realized we must try and strive onward and upward.

Just like that great masterpiece of architecture, the dome of Cologne, begun a thousand years ago has required the continuous efforts of skilled craftsmen during all these centuries and is not yet completed, so will the temple of our science never be completely finished. This fact, however, should never discourage and lead us into the temptation to desert our leaders, and the regular army of brave soldiers, however their personal character may effect us.

We are aware of the common strife ever prompted by our intrinsic desire for happiness, so well expressed in the following verse:

"Of better and brighter days to come  
Man is talking and dreaming ever:  
To gain a happy, a golden home.  
His efforts he ceases never,  
The world decays, and again revives.

But man for improvements ever strives."

But we should be no less persuaded that unity and harmony are the prime conditions for the success of any organization ever mindful of the dying words of an old King, 3000 years ago:

"Concordia parvae res crescunt, discordia maximae dilabuntur"—"Through concord small things grow, through discord the biggest are destroyed." And take the warning expressed thus:

"When forces rule with senseless might,  
No structure there can come to light."

While one of the humblest members of this society, whose liabilities exceed by far his assets, I still claim the privilege to point to some features, which are praiseworthy and to others, which are not.

And I, sincerely hope that my "Never-told



Facts" will be kindly considered by all, and offend none. But to modify and moderate my criticism in advance I wish to call your attention to the general *status quo* of our present age, which is decidedly revolutionary. And taking it for granted that ours is the most enlightened era of all times, we can not gainsay the old proverb:

"Where there is light, there is shadow."

Speaking in general we must admit these shadows exist in our political, social, economical, ethical, and even in our religious life, caused by the excessive perception of liberty, which tends towards socialism in its worst form and finally chaos, roaring through the whole world, breaking down the safeguards which past generations have erected for the well-being of human society. This is the *casus belli*! And this is the *causa causarum* of our deplorable conditions and all our disturbances along all lines!

To be convinced we need not direct our eyes to distressed Europe or the volcanic conditions of the rest of the world. Our own body politic offers us sufficient food for thought, which we cannot easily and without difficulty digest.

And since our medical organization is patterned after our political organization we can hardly expect it to be entirely freed from its defects and shortcomings. Of our political weaknesses the late Lyman Abbott points out two, which he defines as the greatest perils of our Democracy, namely:

"The lack of a generally recognized authority and the lack of a uniformly fixed standard."

Then he goes on to say that no Democracy ever endured. But that our Democracy is better than all others before. And yet he adds: "But we are yet an infant, or a mere boy among the nations of the world, and our Democracy is yet an experiment."

But, if we agreed with Mr. Abbott twenty-five years ago we do not agree with him today, since our nation has grown to be a fully developed man, yes a giant, destined to rule the whole world on our principle and as some have announced, make the world safe for Democracy.

Whether or not these predictions came true I can not say. Let the prophets, the leaders and dictators, who rule upon the supposition "that might makes right" answer this question.

At any rate, since this is the situation all over we can hardly expect that the medical society,

which is a part and parcel of our complex human society should not also suffer from the decline of restraint.

Let me quote Lyman Abbott once more: "Along with this absence of restraint have gone influences to develop individualism in extreme forms."

Referring to our profession again, it cannot be denied that the existence of individualism in extreme forms does exist.

And we further know that it reacts back to its cause, making the absence of restraint more and more apparent, dividing our house, as it were. And as our immortal Abraham Lincoln has said: "A house divided against itself cannot stand," we should attempt with all the fervor, which our love for our profession can inspire, to find a *modus vivendi*, to unite and put it upon such a solid foundation that no storm from without or within may shake it.

To this end I ask your permission to make my own confession of faith:

"I believe in authority, which shall, with our consent, conduct our common affairs.

"I believe in a standard high enough to keep all pretenders, so-called cults, degenerates, and parasites from our door.

"I believe in a code of ethics based upon the principles: 'In all essentials unity, in all non-essentials liberty and charity in and for all.'

"And I believe in a fraternity, not gliding on the giggling waves of expedience and shallow platitudes, but anchored to the rock of the golden rule."

Now if we all make this confession of faith and resolve to live up to it, I can see no reason why we could not work together in peace and harmony, as much as our human frailties shall permit. I cannot refrain, however, from saying that before we can reach our goal, we must attempt to know ourselves a little better, always remembering the old adage:

"There is so much bad in the best of us, and so much good in the worst of us, that it behooves none of us to speak ill about any of us."

Referring to individualism I venture to say, that from my little experience and unbiased observation it exists on both sides, and in the upper as well as in the lower story of the house.

The source of the first individualism is, in my opinion, on the peak of absolute authority, rush-

ing down with ever-increasing force, and with the influx of various tributaries presents a powerful stream.

While the second individualism springs up from the low lands, which takes an independent course and is rather unconcerned which way it flows.

It is obvious that the first, which we may call the one-headed individualism, has always the tendency to concentration, which is represented by some preferred men, who hold positions from which they find it inconvenient to look down upon those of, perhaps, lower ranks and do not receive them with the friendly courtesy the latter expect, which often causes ill-feeling and bitterness.

Of this individualism I ask you to allow me to give you only one example: You remember, perhaps, my old friend and class mate, Dr. Albert Schneider, at the time of his visit to Peoria, Professor at the University of California, and Dean of the College of Police Officers, Berkeley, California. And you, also, remember the paper: "On Cancer and Tuberculosis," which he read before this society at the Armory Hall.

I am pleased to say that he received from you, gentlemen, with whom he came in contact, the kindest reception and the greatest attention.

One evening as we had retired to my house he spoke of this and made the remark: "Well, doctor, you certainly have a high class of medical gentlemen here in Peoria. They have treated me royally, and I shall always remember them with delight. But I am sorry to say that I was not so well treated in Chicago." He then told me that he had called on a man who was the spiritual director of the American Medical Association for many years and is still the man behind the gun. "This man," he said, "received me very coolly and treated me snobbishly." He then visited, or tried to visit, another man of high repute, who happened to be a classmate of us both, and was treated in the same unkindly way.

Here then, we have individualism in extreme forms! As to the multiple or many-headed individualism of which there are so many kinds that I cannot begin to enumerate them—I assert, however, that it is the result of reaction following the old law of "pressure causes counter pressure" and while it may not be so aggressive and willful as the one-headed variety it is just as

reprehensible and deplorable. For it is always in danger to mix up with elements hostile to every authority and to be indifferent to any standard or code of ethics, according to the members of our fraternity the privilege of following their own sweet will and do whatever their own judgment and their personal gain may dictate.

You, perhaps, as well as I, remember the time when the line of demarkation between regular and irregular physicians existed. And you also remember when various schools, deviating from the old principles of Hippocrates and Galen, which we inherited as their lineal descendants, were barred from our societies. And you also recall the time when the dividing line was removed and all physicians who graduated from colleges recognized by the State were admitted to our County and State societies, and the American Medical Association, and are now considered men of good standing, provided they pay their dues and do not openly violate our constitution and by-laws.

Let us not discuss whether or not this move was wise or otherwise. But just consider without prejudice some of its consequences. The first was that the number of students of these so-called irregular schools decreased until they finally closed their doors. The next consequence was that many of the defunct schools merged into others, lowering the average standard induced by the old spirit of dissension, sailing under the treacherous flag: "Nothing succeeds like success."

And I say with emphasis that this spirit, with the dollar as the unit of measure, in whatever disguise it may appear, is nothing but the rankest commercialism, which unfortunately sums up to be the *vis-a-tergo* of many practitioners and not only those of the lower, but of the higher ranks as well. For did we not hear a visiting physician right here on this floor, a year or so ago, advise us to emulate the so-called cults, chiropractors, and the like, and steal their thunder? This in my opinion is not only dishonest, but a very undignified and abhorrent position for any reputable physician to take.

To illustrate into what almost unbelievable errors the excessive desire for mercenary success may lead some otherwise intelligent, but not so well balanced men, I will allude only briefly to a few of the most glaring so-called discoveries of



recent date.

There is, or was, the Hawley Lymph Cure or Animal Therapy which was superseded by the more presumptuous monkey-gland transplantation, which although practiced by and on the "higher-ups" is no less objectionable, but even more impudent, unsavory and unscientific.

Then the Abraham fad, the most stupendous humbug, compared with which Barnum's white elephant appears but as a ridiculous mouse. The latest, but not the last is the so-called Koch's Cancer Cure, *et cetera ad nauseam!*

To disseminate this rank commercialism "The Medical Economic Society, New York" was organized with a Joseph Xavier Netter as Managing Director. From this Netter, whose German name translated into English would be the comparative of pretty, so we may call him Mr. Prettier, I received a circular letter, which startled me. But since I assume that you, gentlemen, received one of his gold-edged letters I will waste no time to read it, unless you ask me to do so. But for the benefit of those who may have delivered this astounding message unopened to the waste-basket, I will read but a few sentences. It begins: "Many State Medical Societies have already passed resolutions making it ethical for doctors to advertise." This is followed by a long row of suggestions and promises, which all begin with an underlined *You can* and is summed up in the promise: *Make money.*

But one astounding sentence I should mention: "You can be the master of your own time and leisure, and win success without depending upon clubs, societies, hospitals, dispensaries and other camouflaged methods of self-advertising!"

The letter ends with offering these services to me as the only physician of my town, all this grand opportunity for the paltry sum of one hundred dollars for the entire year, payable semi-annually in advance. Is this not rich? Here we have the assertion of the poet verified: All thy holy symbols, O Truth Deceit has adopted.

Well, it made no impression upon me and I hope it made none upon you who received a copy of this letter.

As a matter of fact, we all want to live and for that purpose we need money. Some more, some less. As far as I am concerned I admit that I have not been eminently successful on this score, but I blame nobody else but myself, or perhaps,

old Dame Fortune, whose propitious smile I did not often enjoy, or because I am not a salesman who sells himself to anybody, for anything.

Still I do not envy any man who had better opportunities or knew better how to utilize them to make a success as long as he renders honest and valuable services in his profession. But I pity the man who takes the bait of the mercenary anglers, who finally land him on the shore of the bad lands, where he is in imminent danger of changing the most precious jewel of his soul for sordid trash. And I pity him the more money he makes in a dishonorable way and in the language of George Washington "disregards the eternal laws of order and right, which Heaven itself has ordained."

Although not a pessimist nor a habitual calamity howler, I am constrained to say that this world dances around the brink of a volcano and we, professional men, are confronted by the most serious problems, which we must solve if we are to live as an honorable profession or sink down to a *negotium sordidum*—a mean trade, as of yore. In fact, "to be or not to be" is now the paramount question, along all classes of society.

The only preventatives against the onslaught of the swarms of avaricious vultures which undermine our standing in the community, that they may have a free hand to ravish the people, are the constitution and by-laws and the code of Ethics adopted by the American Medical Association, promulgated by its respected Journal. And the best guide, in my opinion, is "The Propaganda for Reform" carried on in the Journal of said Association.

I have mentioned before the high esteem in which I hold our local society, by which I did not mean to say, however that we are all saints and angels. For we are not. Because we are not made that way. And from the Good Book we know that even some of the angels fell, and that even the just falls seven times a day. But if there is anyone here, who claims to be an angel let him show his wings. I don't think there are any in evidence! But how about horns! Are there some who have horns? I hardly think so. But to be frank with you, I have just a slight suspicion, that if we would search and investigate deeply we would be more liable to find some things, which would look more like horns, than wings. That you do not understand me to reflect

upon anyone of you, particularly, I will, therefore give you my own case.

Many years ago I met an old phrenologist, a Professor Palmer, but not the fountainhead Palmer of Salesmanship fame or infamy, who asked me to let him examine my head, and I submitted. He then ran his palms over my dome. After a very careful examination and solemn manipulations he declared that he had discovered some elevations or protuberances, which he called bumps. He then made some flattering statements about the shape of my head, which I do not remember and if I did would not relate them to you tonight. Suffice it to say, that the portly and affable Professor left upon me who was not entirely freed from youthful vanity some pleasant impressions as to my mental capacities.

Later, when I studied the evolution theory and drifted off to the old pagan hypothesis of transmutation and reincarnation, I became a little suspicious of the old bumps, being perhaps, the rudiments or the embryos of horns. But since they have shown no signs of growth in these many years I fear no longer that horns will grow on my head, at least not during my mortal life.

Now since we are pretty well satisfied that we have neither wings, nor horns, but that we are just human beings it behooves us to come together on a common ground where we may slide along with least friction, avoiding sharp corners of an individualism in extreme forms.

This brings us right home to our own family. From my personal observations and from the remarks of others I regret to say that there is some under-current, which has a tendency to divide the younger elements from the older members of our fraternity. To be frank I may state that a man of the first group told me that they, the younger men, were always harmonious and on good terms, while only the old fellows quarrel, fuss and fight. Belonging to the old group I cannot accept this decision without some serious reservations. As to the young men in general today, I know that they are smart and ambitious, not to say bold, and I confess that they irritate me occasionally. But I am quickly reconciled when I remember how smart I was, when I was young and full of peppersauce. To this only one or two illustrations:

Just about a year after my graduation an old Irish doctor, by name Taggart, turned over to me

several cases of diphtheria, some of which were complicated with pneumonia. I had good success, i.e. good luck, for all recovered and I received my fees in full, which looked to me as big as the reward of a champion pugilist. In this spirit I called on the good Doctor to thank him for his great kindness. But I had something else on my mind. I wanted to tell him how I treated those cases, what wonderful results I had and how smart I was. The old Doctor listened attentively to me with bowed head. When I had finished my hymn of self-praise he raised his gray old head (he was past eighty) and said, "You did well, my son, and I am glad of it for your sake as well as for the sake of the patients." And then he said with a suggestive twinkle in his eye, "You think you know all about diphtheria and pneumonia, do you?" Well, I replied, in an undertone, I think I know something about them, don't you think so, Doctor?

"Of course, I do," he answered, "how could I put you in charge of my best families, if I did not believe that you knew something," and, with another and more serious twinkle in his eye, he said: "But, my boy, by the time you are as old as I am now, and have practiced medicine as long as I have, you will, perhaps, often think that you do not know a darned thing of those treacherous diseases."

A little later the solicitor for a Medical Directory called at my office. Having written down my name, he asked me what titles, positions, or distinctions he might insert. I do not remember the details concerning my professional standing, but I do remember very distinctly that I told him that I did a good deal of writing. And he, eager to give me the fullest measure of compliment, wrote down "Medical Author," which I liked very much. However, today, I must laugh, whenever I think of this incident. For here I have hung on to my old hobby and scribbled all these years and am today as far from being a recognized author as a wet candidate for a public office is from being elected in a dry district. One thing, though, I have attained, I learned the truth of the saying of the ancient sage:

"I do not know much, but I know more than many others. For I know that I know nothing."

Returning to the charges of the young against the old groups, I will only add that from certain remarks and insinuations made by men who



made these charges I infer that they are not entirely freed from jealousy and other human frailties, and do not enjoy angelic harmony always!

Moreover, they are not impartial in any quarrel which may exist, but by taking sides often stir up the glow of animosity.

However that may be, let us all confess that we all have our failings and have in the past, said things which had better been unsaid, and have done things which had better been left undone, and let us now resolve to do better in the future, always mindful of the beautiful verse:

"See how we strive, how we quarrel, how thought  
and how feeling divide us.  
But thy locks friend, like mine, meanwhile are  
bleaching fast."

Upon this principle let us forgive and forget past differences and unite under the slogan: "E pluribus unum"—"One for all and all for one."

219 Malone Ave.

## DIGITAL EXPLORATION OF THE CANCEROUS RECTUM\*

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The digital examination of the interior of the rectum follows inspection, and is the most important of all procedures. The practitioner who is familiar with the digital examination of these parts can diagnose better with his finger than by any other way. Fully 80 per cent of all rectal disorders may be recognized with the finger. Digital exploration not only confirms the local conditions found by inspection but also demonstrates other conditions to which attention may need to be directed.

More than one surgeon has gone into the operating room to operate on a case of hemorrhoids and a few minutes later discovered with dismay that he was dealing with cancer of the rectum, not hemorrhoids.

The "Snap-shot" diagnosis of hemorrhoids is all too often based upon the patient's own diagnosis of "piles," conveniently confirmed by what superficially appears to be evidence of hemorrhoids.

The fact that there is slight discomfort in the rectum with occasional bleeding at stool does not

warrant a diagnosis of hemorrhoids, because it frequently happens that these are the only tangible evidences of very early, rectal cancer.

Because the patient is not the "cancer age" is no reason to eliminate this possibility. There have been numerous cases of cancer—particularly in persons scarcely out of their teens.

Such surprises in the operating room are not only embarrassing; they are inexcusable. Every case presenting rectal symptoms warrants thorough examination by sight as well as touch.

The knowledge obtained by digital exploration is not limited alone to the interior of the rectum, but informs the examiner regarding all the pelvic viscera, including the urinary and genital organs of both sexes and their supporting ligaments and fascias and the spaces between the various organs and tissues.

The examining finger must be well lubricated, and whatever lubricant is used should be kept in collapsible tubes, as this is the only way of having a clean, sterile lubricant at all times. The cost is little and the advantages great over the old fashioned jar into which fingers and instruments were repeatedly dipped, thus carrying infection from one patient to another.

Several very satisfactory lubricants are obtainable under various proprietary names, or the physician may prepare his own antiseptic soluble jelly as follows:

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One ounce of tragacanth placed in a bowl is covered with a half pint of water. More water is added as the tragacanth dissolves. This soaking process requires two days. Two ounces of glycerin is then thoroughly mixed in and the whole sterilized by boiling under cover for 15 minutes. After it cools a sufficient amount of carbolic acid is added to make a  $\frac{1}{2}$  of 1 per cent strength, and the jelly is then put up in collapsible tubes.

The examining hand should always be gloved because it prevents soiling the finger with fecal matter, pus or discharge, and protects the examiner against possible infection. The thin rubber does not interfere with the tactile sense, and in the patient's interest it will be found to enter the rectum more easily than the bare finger.

After the examination the lubricating substance and any foreign material should be wiped off the glove with a bit of dry gauze

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before removing the glove from the hand.

If a digital examination must be made without a rubber glove or finger cot, the finger nail should be closely trimmed and the crevices beneath and around the nail well filled with soap, scratched from a bar. The rest of the hand should be well covered with vaseline.

A careful observance of the natural direction of the anal and rectal passages will further facilitate their exploration. As the finger passes the external sphincter the anal canal inclines forward and upward toward the umbilicus for a distance of one and one-half inches, or until the second joint of the finger has been introduced, and is then turned backward toward the sacrum as it enters the ampulla of the rectum. The gloved finger properly annointed is pressed against the anal opening for a moment or two. The flexor surface of the finger against the posterior quadrant and the patient is asked to bear down. A moment's pause here permits the sphincter to relax and the finger can usually be painlessly introduced; but if hurried or roughly pushed forward the external sphincter will spasmodically contract and cause suffering to the patient as well as embarrassment and difficulty for the examiner. The examining finger, after being held for a moment against the anus, is encouraged to pass the sphincter by a gentle onward insinuating pressure until the first joint of the finger has been introduced. The finger should be slowly introduced that it may palpate the anal walls in its upward passage. A mistake frequently made is to promptly introduce the finger its full length. At least half of the proctologic disturbances are evidenced in the anal canal, and by the introduction of the finger the lesion may be pushed up some distance ahead of the finger, thus giving the impression that it is higher in the bowel than it actually is. As the finger passes the external sphincter this muscle is excited to contraction and its resistance is thus noted.

1. A spasmodically contracted, tender sphincter indicates acute disease of the anal canal.

2. A hard, resistant, hypertrophied sphincter indicates chronic disease.

3. A relaxed, flaccid sphincter indicates exhaustion from old age, traumatism, general physical debility, local cancer or gradual weakening of the muscle due to the frequent protrusion and replacement of large hemorrhoids.

About an inch up the anal canal a sulcus will be felt encircling the bowel between the external and internal sphincter. This depression is to be carefully palpated because the internal openings of fistulae are frequent here.

The ability to find an internal opening of the fistula or the fluctuation of a perineal abscess is of inestimable value to the examiner. An uneven spot, elevated or depressed, but indurated and tender, always signifies local pathology.

Just above this depression is the internal sphincter, which feels like a light ring or band and beyond which the point of the finger slips into the dilatation of the lower rectum. When feces are not lodged in the lower portion of the rectum the mucous walls of the canal lie close together, and the introduction of the finger merely separates them.

As the finger passes the internal sphincter an hypertrophied papilla or diseased anal pocket or valve should be noted. As the finger enters the rectal ampulla its walls must be slowly palpated, and as but the pulp of the finger contains tactile filaments the finger must be gradually rotated, the patient turned and even the finger of the right hand used first and then the finger of the left hand, that all of the rectum may be explored.

Foreign bodies lodged within the rectum are often found just above the internal sphincter. The condition of the mucosa will be determined by the finger and its normal folds sought for. A smooth surface indicates atony, and a dry surface insufficient glandular secretion.

If a tumor is felt, its size, location, shape, movability and resistance are to be ascertained, polypi, stricture, abscess, gallstones and foreign bodies may be felt. Fecal impaction of the rectum or colon has often been mistaken for cancer. The tumor of appendicitis may sometimes be felt in the right pelvic fossa, if the appendix is low, and rectal palpation should be practiced in every case of suspected appendicitis. Malignant disease of the rectum or pelvis, the tumor of intussusception, or an infected gland may also be felt. Induration or stricture of the walls of the rectum and the condition of the other pelvic organs is to be determined. An enlarged prostate pressing on the rectum will be plainly felt and to the uninitiated may be mistaken for a stricture or tumor of the rectum. Prolapse or intussusception of the sigmoid will



readily be made out by the examining finger.

If fracture of the pelvic ring is suspected an examination should be made with the finger in the rectum, as with the educated finger, the fractured ends of the bones may be readily detected. Also the presence of blood in the rectum usually indicates that the bowel has been punctured by one of the fractured ends of the bones of the pelvis.

The iliac fossae should be firmly explored to determine whether there is any tenderness or tumor. The finger should be introduced its full length, and by passing the other fingers of the hand back into the intergluteal space instead of doubling them into the palm, an increased reach is obtained; also if the patient bears down or strains during the examination, one or two inches more of the rectum can be examined. As the finger is being withdrawn, the condition of the levator ani may be investigated by asking the patient to voluntarily and forcibly contract the sphincters. As they both receive their nerve supply from the fourth sacral, they will, therefore, contract simultaneously.

Pus on the examining finger suggests a blind internal fistula.

After exploring well the anterior wall of the rectum, we must now turn the finger to its posterior wall, when the lower part of the front of the sacrum and the whole of the coccyx can be felt, and laterally the soft structures of the ischio rectal fossae can be recognized. In the female the vagina and uterus separate the urethra and bladder from the rectum, but the os cervix and posterior aspect of the body of the uterus can be felt through the anterior rectal wall.

By introducing the index finger of the right hand into the rectum and passing it along the posterior wall and applying the thumb of the same hand on the skin over the coccyx, this bone may be grasped and moved forward and backward to determine any fracture, displacement or growth connected with it, or any painful points may be elicited. The finger must thus become educated to the natural feel and condition of parts in the healthy rectum, so that when it is introduced into a canal which has undergone any change or disease, the difference of feel, resistance, or touch can at once be detected, such as over-sensitiveness of the

parts, pain, contraction, dilation, stricture, piles, ulceration, or foreign bodies.

Having reached an obstruction to or constriction of the rectal lumen we carefully and delicately explore every recess. If the stricture is so small as not to admit the passage of the finger easily, force should not be used. Rupture of the bowel has followed such an attempt.

Digital examination is of great value in all rectal strictures, and in cancer it is absolutely necessary because here a hard nodular mass will be found which involves perhaps only one side of the rectum, while the other side is covered with normal mucous membrane; or the mass may encircle the rectum, leaving only a small opening in the middle. Its peculiar character on palpation is a hard, rough, irregular mass projecting into the rectum, easily differentiating it from simple stricture, which is smooth, or a tubercular stricture, which undermines surrounding areas.

The commonest form of cancer within the rectum is the scirrhus. It usually occurs just above the internal sphincter or in the ampulla of the rectum, but may occur elsewhere. It arises as a hard, nodular mass and extends circularly until it involves the whole circumference of the rectum, leaving only a small opening in the middle. This latter condition is the usual finding when the physician is consulted. Mickulitz found three-fourths of his cases so progressed. Gussenbaur estimates that 65 per cent. of all rectal cancers are of this variety. These cancers grow lengthwise of the bowel very slowly and rarely involve more than two inches.

Cancers high up in the rectum and in the sigmoid are the most difficult to diagnose and have been repeatedly mistaken for a diseased ovary or tube or for other pelvic tumors.

The encephaloid cancer occurs as a soft polypoid mass, very like a benign adenoma, but it has a broad base which infiltrates the submucous tissue. These tumors contribute 15 per cent. of the rectal cancers. They break down very early and with few exceptions have reached the ulcerative stage by the time they are seen by the physician. By palpation irregular masses appear to have been broken off roughly. Raised edges surround the ulcer and give it a crater-like appearance. The finger, being well anointed and inserted feels this rough irregular edge all

around the constriction and then suddenly passes into a wider channel above where masses of hardened feces are frequently found. Exceptionally, a softer polypoid mass is found simulating a benign adenoma, but having a broad base which infiltrates the submucous tissue.

Every possible care must be taken in passing the finger through the obstruction where it surrounds the rectum, especially if near the peritoneal surfaces, for fear of tearing through the friable wall and entering the abdomen. The necrosis may leave a very thin partition at some one point, or the ulceration in the bowel above the obstruction may be very deep. The finger must never be pushed hurriedly through a carcinomatous stricture and even soft bougies must be used with great caution. Numerous cases of rupture and sudden death have resulted from carelessness in making an examination.

The abdomino-rectal palpation should always be included as a routine procedure because frequently an unsuspected pelvic condition outside of the rectum will be found. In view of the intimate nervous relationship of the various pelvic viscera such symptoms as sacral ache, bearing down pains, heaviness in the pelvis or the discharge of blood or pus may come from one or more of a number of conditions either intra or extra rectal.

The patient to be examined is placed in the lithotomy position with his shoulders slightly raised and his knees drawn up. The examiner then stands on the patient's left side and by gentle but firm pressure through the lower abdominal wall in the left semi-lunar line, the sigmoid is felt to slip beneath the fingers like a large flat cord. If the sigmoid is filled it becomes still more distinct. If the bowel is very full the sigmoid curve will extend over to the left pelvis or anteriorly over the bladder and then back to the sacrum, or up into the abdomen and then back to the pelvic flank.

Fecal tumors in the sigmoid are diagnosed bimanually by their being continuous with other fecal masses in the rectum. They occupy some part of the upper pelvis as has just been described, are elongated and very movable because of the long meso-sigmoid. They are often made up of scybalous nodules. They are sensitive to manipulation. If any doubt exists as to their

character a purgative or enema should be given and a sigmoidoscopic examination made later.

#### VAGINAL EXAMINATION

The pelvic reproductive organs should always be carefully examined in every female proctologic patient. The relation between these two systems is so intimate that much valuable information may be obtained regarding the rectum by palpation through the vaginal wall. The lower part of the rectum may thus be observed from the level of the cervix down, by pressing upon it and rolling it from side to side, thus determining its size, mobility and sensitiveness. Through the posterior vaginal wall the rectal tube feels like a firm, flat band with longitudinal striae, which under pressure slips from side to side freely and without pain. Fecal accumulations fill out that portion of the rectum and give it a more tubular form. Fecal masses feel like so much putty and can be indented by the fingers unless too firmly inspissated. That part of the rectum behind the cervix is often very sensitive and more so when it is distended. This sensitive area may be erroneously diagnosed as a tumor behind the uterus or an inflamed and prolapsed ovary. A loaded rectum or sigmoid may so fill up the pelvis behind the broad ligaments as to be mistaken for an ovarian or tubal tumor, or if the upper rectum alone is but moderately full it may lie behind but one broad ligament.

In a woman with a lax perineum, the anterior wall and sometimes much of the anal canal can be everted by introducing two fingers into the vagina and pushing out the anal mucosa.

In other instances the vagino-rectal examination affords much valuable information. This method may be accomplished by introducing the index finger of the left hand into the rectum and the right index into the vagina. Sometimes the examination may be more easily accomplished by introducing the index fingers into the rectum and the thumb of the same hand into the vagina.

During the examination a fistula may be found connecting the vagina and rectum and cancer may surround it on both the vaginal and rectal surfaces. Carcinoma of the uterus and vagina invade the rectum and cause fistulous openings, but only when in an advanced stage. On the other hand, low cancer of the rectum involves the vaginal wall comparatively early.



RECTAL EXAMINATION OF THE MALE GENITO-  
URINARY ORGANS

Digital manipulation through the rectum is the only way in which the prostate gland, deep urethra, Cowper's gland and the seminal vesicles can be palpated.

On the anterior wall, about three inches up, a transverse fold of mucous membrane can easily be felt. This fold is constant and forms the first impediment to the passage of a rectal bougie or enema tube. It corresponds to the lower border of the prostate gland, which can be felt quite plainly through the anterior wall of the rectum.

The prostate in the healthy adult is about the size of a large chestnut, and is two inches from the anus. Its size and physical characteristics are more satisfactorily noted when the bladder is half full, as then the prostate is pressed toward the rectum and better within reach of the examining finger. The seminal vesicles may be felt beyond the prostate as two soft oblong bodies at the sides of the base of the bladder. They are about two inches long by one-half inch in width. During the voiding of constipated feces pressure of the distended rectum upon the vesicles may cause the escape of some of their contents through the urethra. A nervous hypochondriacal individual may mistake this for spermatorrhea.

In front of this is the membranous portion of the urethra, which is about three-quarters of an inch long, and just in front of this is the bulb of the corpus spongiosum, which can be felt by the finger with a little practice.

On further exploring the anterior wall of the rectum, the finger can fix and make out the apex, lateral lobes and base of the prostate. The retro-vesicle fold of the peritoneum is usually four inches from the anus, and can be reached as a rule by the finger.

This examination is best accomplished with the patient standing on the floor, and bending well forward, resting on his hands on the examining table. His body is bent to an angle of 130 degrees to the perpendicular. The examiner sits behind the patient and inserts his right forefinger into the rectum. The fore and middle fingers of the left hand are pressed into the groin of the patient to push the vesicle down against the examining finger.

This examination furnishes much valuable in-

formation and is a very necessary procedure. Vesical irritation is a frequent source of reflex disturbance, hence the bladder should always be examined. A calculus may be the origin of the trouble, although no bladder symptoms are noted.

The rectal examination should be made both when the bladder is full and empty, for the findings in each instance may be entirely different. The bimanual examination, one finger in the rectum and the other hand sweeping the pubes and then the perineum should be undertaken immediately following. When the bladder is distended its outline can be elicited, but following catheterization and emptying of the bladder, if a hard, non-resistant, rounded or unequal mass can be felt, a prostatic enlargement or a tumor of the bladder may be suspected. During the rectal examination an instrument, a sound or systoscope should be in the bladder.

An enlarged prostate means hypertrophy, tumor, cyst, stone, inflammation or an abscess. In true hypertrophy of the prostate, if the lateral lobes are not particularly involved the prostate may not bulge toward the rectum. If moderately enlarged, the lobes may vary in size and be unequal and even nodulated. The prostate may be fairly firm or somewhat soft, but in true hypertrophy it is never doughy or extremely hard.

A small prostate signifies atrophy, failure of development, or destruction of the gland.

Increased hardness indicates cancer, tuberculosis, inflammation or stone.

Softening of the gland shows chronic atony or an abscess.

That part of the surface of the prostate which may be felt per rectum is usually smooth and round, but not nodular. In cancer of the prostate the consistency is hard, even to stony hardness. All cases of cancer of the prostate may not reach this firmness, but when the gland is hard it indicates advanced cancer. This hardness may vary in different parts of the surface of the gland, and it may even be hard and nodular in places.

Localized soft bulging is probably a cyst.

Enlargement of the whole lobe with firmness points to parenchymatous prostatitis.

A small hard nodule refers to a follicular, inflammatory or tubercular focus, and if soft an abscess of the node is developing.

Stone in the prostate can sometimes be determined by a crackling or crepitus imparted to the examining finger. These grains, sometimes the size of a very small pea, grate upon other stones confined within a sac and produce this peculiar and characteristic sensation. The pseudocysts may become infected, and with the presence of these foreign bodies may cause marked urinary symptoms.

The seminal vesicles, if they assume the same consistency as the mass which is considered as the prostate, and particularly if non-sensitive, are often infiltrated with carcinoma. In a seminal vesiculitis one may feel atonic vesicles which are more sensitive or less sensitive to touch. Chronically inflamed and thickened walls may give rise to considerable hardness, but they are painful to the touch.

Cyst of the utriculus presents an enlargement situated in the median line, taking the course of the urethra. If the cyst is large, fluctuations may be felt.

Rectal examination is far more painful in hypertrophy or acute inflammation of these organs than in carcinoma.

These rectal findings are practically the same whether the bladder is empty or full. When the bladder is full a degree of firmness is imparted to the prostate. Some of the above points are more readily determined when the bladder is distended, but the examination is more painful. A more accurate interpretation of the findings is obtained with a metal sound through the urethra into the bladder, and also any infiltration of the urethra may be discovered which is so significant of cancer of the prostate. When a distinctly hard or stony prostate with a similar infiltration of the urethra at the neck of the bladder or along the course of the urethra is found it practically establishes a clinical diagnosis of cancer. When contracture of the neck of the bladder and a sclerotic prostate is suspected this procedure is invaluable. Without an instrument in the bladder one might believe considerable prostatic tissue to be present, but with the staff in place, it is possible to learn the exact condition.

Enlargement of the prostate, when it gives rise to any symptoms at all, always causes straining and straining frequently repeated, acting upon an intricate plexus of valveless veins, always

causes congestion. Often the bowel is affected as much as the bladder. Hemorrhoids and prolapse of the rectum are seldom wanting in cases of long standing prostatic enlargement.

#### CONCLUSIONS

To estimate the true value of surgery for cancer of the rectum we must know the object of the operation and the limitations of its results.

The radical operation aims at removal of not only all the diseased tissues, but also those tissues which contain possibilities of future developments. It is absurd to attempt extensive surgical procedure where the possibility of radical removal does not exist, and therefore the operation must be planned to suit the objects to be attained. The age of the patient, his general health, strength and the condition of his kidneys and cardio-vascular system must be considered.

The vital question arising in the mind of every practitioner upon finding a cancer of the lower bowel is what course of treatment shall be advised and why. Certain surgeons will not attempt extirpation unless the neoplasm is confined to the intestinal wall, is movable and not complicated by ganglionic or metastatic extension, while others believe that adhesion of the rectum to other pelvic organs and even the lymphatic enlargement may sometimes be inflammatory and a hope of cure may be expected in some of these. If the examining finger fairly passes beyond the growth in an upward direction, the case may be considered favorable for operation. In the male a cancer of the rectum close to the prostate may not invade the prostate for a long time; in women, on the contrary, cancer on the anterior wall of the rectum soon implicates the vagina. If the growth is adherent to the upper part of the vagina, the peritoneal membrane of Douglas' pouch is pretty sure to be involved and the growth cannot be removed without opening the peritoneum. In such cases perineal resection should not be attempted as the lymph glands beyond are doubtless diseased. If the neoplasm is confined to the posterior wall, the case is much more favorable. Extension beyond the rectal wall, fixing it to the sacrum, bladder, prostate, urethra, vagina or uterus, will usually constitute a contra-indication to radical operation.

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## THE ECONOMIC FACTOR IN THE TREATMENT OF SYPHILIS

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It behooves us as physicians to apply common sense and the square deal to the development of modern clinical syphilology along lines compatible with the best interests of the individual and community. The following brief consideration of the problem aims to emphasize the methods by which a syphilitic person can be helped from becoming a burden on the finances of the family and the community.

Physicians who are engaged in the examination of prospective employees for large concerns should be on the look-out for latent syphilis in order to avoid conflicts with the compensation laws. Prompt recognition and treatment of syphilis will prevent late manifestations of the disease, with their train of chronic sickness and even fatalities.

We all wish to limit the clinics and so it is up to us to avoid giving more treatment than is necessary, while at the same time keeping the cost of such treatment down to a minimum. Only in this manner can we prevent driving people with small salaries to institutions and clinics. However, just as excessive treatment of syphilis may incapacitate the patient, so, to the same extent, insufficient treatment may in later years, because of the development of neurosyphilis, throw the patient on the support of the community.

The dream of Ehrlich was to achieve the complete sterilization of the patient by means of one injection of a specific drug. This has been realized in certain diseases whose etiological factor is closely related to the spirochaeta pallida, namely, chicken spirillosis, framboesia and recurrent fever. Unfortunately, sterilization in this manner has been attained only in laboratory animals, never in humans.

Conversely, undertreatment is also economically disastrous. The latest data from the Hoffmann clinic in Bonn show the harmful effects of giving small doses of neoarsphenamine. A series of patients who were insufficiently treated showed a much higher percentage of syphilitic changes of the spinal fluid than comparable series of untreated and properly treated patients.

Arsenic in the form of arsphenamine or one of its many derivatives must be employed in syph-

ilis therapy. Its action is chiefly spirocheticidal, and only to a lesser degree does it increase the formation of specific and non-specific anti-bodies through the stimulation released by the toxins of the dead spirochaetes. The form in which the arsenic is offered to the body is of consequence, for Kolle, Zieler and Voegtlin assign a better chemotherapeutic index and index of sterilization to the clinically employed arsphenamine derivatives, such as neo and sulpharsphenamine, than to its parent drug.

On the other hand, mercury does not effect the death of many spirochaetes, and owes the major portion of its therapeutic value to its power of stimulating the formation of immune bodies. It is the opinion of most of the authorities that the dosage of mercury in this country is too low. As to the manner in which to employ mercury, inunctions are the route by which the greatest amount of this heavy metal can be retained in the body. Since this is at the same time the cheapest treatment, the physician should advise its adoption, keeping in mind, however, the possibility of a mercurial dermatitis.

The controversy over the use of an insoluble or soluble form of mercury or bismuth is not to be considered here. When giving the drug in soluble form, the injections should be of smaller quantity and at more frequent intervals than when an insoluble preparation is used and therefore the insoluble form is cheaper, while the danger of any accumulative effect is small.

A consideration of the above data is necessary in order to understand what constitutes an efficient and economical basis of syphilis therapy. The danger in adopting the following formula is considerable, for there is no one standard for all. Each patient presents an individual problem. Therefore let us call this an outline of average treatment.

For the patient who presents an early lesion of syphilis and whose blood serum shows complete hemolysis, a series of intravenous neoarsphenamine injections at bi-weekly intervals should be given and the total quantity of the drug administered in this series should be between 6 and 7 grams. Concomitant with these intravenous injections, bismuth or mercury is given intramuscularly, to total 1.5 grams in one series. A rest of 6 weeks is allowed, another Wassermann test is made, and a second series exactly like the one just described is given. Every 6

months thereafter, for 2 years, a Wassermann test is made, but if the reaction is always negative, no further treatment is instituted. Should at any time a positive test be found, the patient is from that time on treated as follows:

Three such series, each one to consist of 6 to 7 grams of neoarsphenamine and 1.5 grams of bismuth or mercury are given the first year, at intervals of 2 months; three series in the second year and two in the third year. This method of treatment is applicable to all cases of primary and secondary syphilis presenting a positive Wassermann reaction.

Tertiary syphilis of the skin and mucous membrane is well treated with neoarsphenamine and iodine. In syphilis of the big blood vessels we advocate small doses of neoarsphenamine, preceded by a three weeks course of iodine.

Nonne advises a mild and careful combination therapy in *tabes dorsalis*; to disregard the Wassermann reaction of the blood and spinal fluid, and not to administer neoarsphenamine alone. It should be the prime object to stabilize the clinical symptoms.

The importance of instituting fever therapy, as with malaria or typhoid fever, immediately upon the recognition of general paresis, cannot be over stressed, for only with this modality of treatment can the patient, with a fair degree of certainty be retained to an independent position in the community. The results obtained with tryparsamide have been contradictory.

But above all, we must try to prevent syphilis. The prophylaxis of syphilis should be stressed carefully, by the medical adviser, both in his private talks to men and women and in his public conferences. How to prevent this disease must be explained clearly in public lectures which should be amply illustrated with lantern slides or moving pictures. In such a way the public throughout the country may be educated as to venereal diseases, so that the youth of today may see these diseases in their proper light, freed from the curtain of mystery and prudery which still tries to conceal them.

And of equal importance in the fight to help the state free itself of the expenditure of lives and money because of syphilis, is the prompt institution of antisyphilitic treatment in the pregnant woman and the newborn child. Here lies a great hope for the future. The intramuscular injection of the arsenicals has proven so effica-

cious that inaccessibility to the intravenous route can no longer excuse the practitioner's delay in helping the infant. At this point it is pertinent to consider the question of treating two or more members of the same family. When the father, mother and child are all infected with syphilis, the problem of cheaply and yet efficiently treating them is complicated and often requires ingenuity.

Even though the treatment has been carried out *legis artis*, there are many danger signals which the practitioner may not heed and as a direct consequence, incapacitate the patient, to the extent that he cannot earn a livelihood. An enumeration of these will be undertaken with the idea of avoiding such accidents.

Of first importance is the correct diagnosis of syphilis. Because of the prompt response to treatment and the excellent chances for cure which the disease manifests in its early seronegative phase, it is essential to be proficient in the examination for the spirochaete pallida by the dark-field method. Unless a man is qualified by many years of experience, at least two physicians should always make the examination. For a diagnosis of syphilis, when incorrect, can have tragic sequelae.

The presence of cardiovascular or thyroid disease constitutes a contra-indication to vigorous treatment. In the same way arsenical administration in the presence of a streptococcus infection may prove fatal. Should, for instance, an active pulmonary tuberculosis be discovered on examination, care must be exercised in the selection and dosage of neoarsphenamine, for we cannot agree with Kolle that this drug is well tolerated under these conditions. And every day there are many people treated with arsphenamine and mercury whose urine has never been tested for albumin.

During the course of treatment, the development of any intercurrent disease should indicate immediate cessation of antisyphilitic therapy. At the same time the physician must beware of complications of treatment, such as mercurialism and iodism, but these unfortunate sequelae of medication can usually be avoided by careful treatment and constant search for warning signals.

Whenever the symptoms of syphilis remain fixed, as for example, a solitary papule on the penis, resembling lichen planus or psoriasis, or several circumscribed ulcers on the body, persisting in spite of intensive treatment, a change



should be made to some other drug. Furthermore, a patient may display intolerance to neoarsphenamine and tolerate sulphur or silver-arsphenamine without difficulty.

By actual toxicity tests on rabbits, the arsphenamine manufactured today in the United States is in many instances equal to its foreign rival. Since this is the case and since no particular skill or experience is involved in the technique of administration, the charge, so often made, of the high cost of syphilis treatment, must be squarely faced. Many physicians accept a very nominal fee for the intravenous injections of mercury, calcium chloride and sodium cacodylate, but when it is a question of injecting arsphenamine, an excessively disproportional fee is asked. It is true that the administration of arsphenamine is accompanied by a greater degree of danger than that of calcium chloride, but many of us have certainly observed serious paravenous infiltrations with the latter drug.

Another unnecessary financial burden inflicted on the patient is the oft repeated Wassermann test. The more we learn about this phenomenon, the more cautious we are in its interpretation. For, in the final analysis, there is no practical value in repeatedly determining the serological condition of a patient who has presented himself with a generalized secondary exanthem and a positive Wassermann reaction. In the same way, not only physicians engaged solely in general practice, but even specialists are not always likely to be qualified to interpret a doubtful or one plus Wassermann reaction, in respect to duration, method and choice of treatment.

Also, cerebrospinal fluid findings are not of any prognostic value, if the disease is less than two years old. The syphilitic changes of this fluid reach a maximum ten months after infection, and from that time on return gradually in well treated cases, to normality. Therefore the patient should be spared this ever dangerous diagnostic measure as much as possible and from a therapeutic standpoint, the Swift-Ellis method has not shown the excellent results prophesied for it. By this procedure, we understand the intradural injection of salvarsanized serum, that is, the blood-serum of the patient taken after the injection of arsphenamine. The large expense and the loss of time, incident to this form of treatment, is a serious factor to consider.

The clinician must always be on the alert for

individuals beset with syphilophobia. This type of person is difficult to handle, because he usually wanders from one doctor to another, and in the meantime very often the family's only too limited resources are squandered.

Should a chance paravenous arsphenamine injection occur, Dietel's method has proven excellent in stilling the pain and preventing an infiltration which may keep the patient from work for many weeks. Dietel advises at once to remove the syringe from the needle which remains in the infiltration, and as much as possible is reaspirated with another syringe; thereupon 10 c.c. of a sterile sodium chloride solution or 0.5 gram of sodium thiosulphate is injected through the same needle, so that a fairly large cushion is formed at the point of injection.

Let us not forget that there are certain danger signals in the treatment of syphilis with arsphenamine with which the clinician must be thoroughly cognizant in order to avoid a possible atrophy of the liver, exfoliative dermatitis and death. The administration of glucose by mouth and intravenously can be employed to avoid untoward liver reactions.

Following one or more administrations of arsphenamine, the patient may experience various degrees of lassitude and malaise, or he may grow icteric and lose weight. Of course not every jaundice occurring in the course of antisyphilitic therapy is ominous, for like encephalitis hemorrhagica and the Jarisch-Herxheimer cutaneous reaction, it may arise from the liberation of toxins resulting from the lytic action of arsphenamine on the spirochaete.

The skin is also our best mirror of arsenical saturation, for it early reflects an impending disaster. Any cutaneous exanthem, usually of an erythemosquamous nature, should force us to be cautious in the further use of all antisyphilitic drugs. A generalized scaly erythema necessitates immediate cessation of arsenic administration. Pigmentation, hyperkeratosis, herpes zoster, hyperhidrosis and erythema of the palms and soles indicate arsenical saturation. All abnormal subjective sensations of pruritus, paresthesia, pain and tenderness of tendons and muscles, occurring in a patient treated with arsenic, are paramount warning signs and must be heeded.

It is not entirely out of the question to consider methods of treatment which may be only secondary in character, but which are, neverthe-

less, of distinct help in reducing the cost of treatment. While travelling, patients should not neglect treatment, therefore the institution of internal medication and vapor baths will help to bridge an otherwise unavoidable gap in the regular treatment.

In my short period of practice, I have already seen the necessity of doing the things which I have enumerated above. Both to patients who come to the office and to those who come to the clinic, I feel that it is essential to tell them at once about the duration and expense of the treatment. Although the secondary adjuncts of therapy enumerated above, may under certain conditions serve as substitutes for the regular treatment, still in the final analysis at least some intravenous injections must be given.

By taking the patient in hand and discussing with him all his problems, such as his income, conditions of living, his environment and temperament, his social and marital status and his vocation, I find that the patient returns with regularity and continues his treatment until cured. Only in this way will we, as regular members of the medical profession, continue to be entrusted with the care of the syphilitic patient, and keep him from going to the public institutions and dispensaries.

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### TULAREMIA WITH REPORT OF SEVEN CASES

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Tularemia is an acute infectious disease caused by *Bacterium tularense*. The forms of the disease most commonly seen are characterized by the following symptoms: Small punched out ulcer at site of infection; adenitis in glands into which infected area drains; severe generalized aching, muscular pains and soreness; headache; nausea and vomiting; profuse sweats; and fever ranging from 101 to 104 degrees and lasting from two to four weeks.

*Bacterium tularense* is a small pleomorphic organism. In young cultures bacillary and coccoidal forms are seen. As the culture becomes older all organisms become coccoidal in form. Its other cultural characteristics are of interest chiefly to laboratory men and will not be described here. In nature *Bacterium tularense* is the cause of a fatal bacteriemia in rodents. It is

transmitted from the infected animal to man either by direct contact with the flesh of diseased animals or by the bite of blood sucking insects such as the fly or tick.

Dr. Edward Francis after making a study of 220 case reports divides the disease as it occurs in man into four clinical types. These are: 1 Ulceroglandular; 2 Oculoglandular; 3 Glandular; 4 Typhoidal.<sup>1</sup>

In the ulceroglandular type the initial lesion is a small papule on the skin at the site of infection. In two or three days the skin covering this papule and the underlying tissues become necrotic and slough out leaving a small punched out ulcer with a diameter averaging three-eighths of an inch. The regional lymph glands are involved.

In the oculoglandular type the initial lesion consists of one or more ulcers on the bulbar or palpebral conjunctiva or cornea. There is always a severe conjunctivitis. The regional lymph glands are involved.

In the purely glandular type the glands are involved but no initial lesion is found. The infection in these cases probably penetrates the skin without causing a local reaction.

In the typhoidal type no local lesions or glandular involvement occurs. The mode of entrance into the body is unknown. The clinical picture is that of typhoid fever.

The disease has been reported from twenty-nine states and from Washington, D. C. In 1925 it was described in Japan under the name of "O'Hara's Disease."

The incubation period is from one to nine days. The usual period averages three or four days. The general symptoms are very much alike in all types of cases. The patient usually gives the following history: A few days—generally three or four—after having skinned or dressed a rabbit he suddenly becomes ill, feeling very much as if he were taking influenza. He has a mild or severe chill, severe headache and backache, general muscular pains and soreness. He may be nauseated and sometimes vomits. Profuse sweats are often seen. The temperature runs up to 102 or 103 degrees and sometimes higher. Within two days after the onset of these symptoms pain and tenderness is noticed in the regional lymph nodes of the infected area in the first three types of the disease. If the site



of infection is in one of the upper extremities the glands at the elbow or axilla are inflamed. If in one of the lower extremities the glands just above the knee along the internal saphenous vein or in the groin are involved. In the oculoglandular type the glands in front of the ear and along the sides of the neck are swollen and tender. Within twenty-four hours after the adenitis appears a papule appears at the original site of entry of the infection in the first two types of the infection. This papule is very sensitive and causes much pain. In two or three days necrosis occurs in this papule, the tissues slough out leaving the characteristic ulcer. This has a punched-out appearance and when well developed has sharply defined edges dropping off abruptly to the base. The base is often a bright red and is exquisitely sensitive. This ulcer is very indolent—does not respond to treatment and usually does not heal until from four to six weeks after the onset of the attack. It is then replaced by scar-tissue.

The fever rises quickly at the onset often reaching 104 degrees; after the first two or three days it drops to normal or near normal, but after one or two days it runs up again almost as high as before. After this secondary rise there is a gradual return to normal. The entire febrile period in the average case lasts from two to four weeks.

The regional lymph glands are quite large by the fourth day of the illness, usually reaching the size of an English walnut. The glands are very tender and the overlying skin may be red. Rarely red streaks are seen between the initial lesion and the infected glands. These glands may slowly return to normal size several weeks after the fever has returned to normal but in about one-half of the cases suppuration occurs. In one case which was under my observation in 1919, suppuration occurred in an axillary gland six months after the onset of the disease.

Convalescence is slow and is characterized by extreme prostration. In severe cases the patient is very weak, short of breath on exertion and light-headed for one or two months after the fever has subsided.

The history of tularemia<sup>2</sup> is of unusual interest. It is the only disease which has been worked out from start to finish in the United States. *Bacterium tularense* was discovered by McCoy

and Chapin in 1911, while they were investigating a plague-like epidemic in ground squirrels in Tulare county, California. In 1911, Dr. Pearse of Brigham City, Utah, read a paper on "Deer Fly Fever" before the Utah State Medical Society. In this paper he described six cases of the disease which was popularly known as fly-bite or deer fly fever. This paper gave the first accurate clinical description of the disease which we now know as tularemia. In 1913, Dr. Vail, a Cincinnati ophthalmologist, saw a peculiar case of conjunctivitis with marked glandular involvement in front of the ear. He made a clinical diagnosis of glanders. Infected matter from the eye was injected into guinea pigs by Drs. Wherry and Lamb of Cincinnati and after several animal passages they isolated bacterium tularense. This was the first case of definite bacterium tularense infection recorded in the human. In 1914, Dr. Sattler, also a Cincinnati ophthalmic surgeon, saw a similar eye infection in which Drs. Wherry and Lamb made the diagnosis in the same manner. They also found that this patient, who lived in southern Indiana, had handled rabbits a few days before the eye infection started and later they succeeded in isolating the organism from rabbits found in the locality in which the patient lived, thus proving conclusively the source of the infection. In 1916, Dr. Lamb reported an eye infection caused by *Bacterium tularense* in a young colored girl living in Ohio, not far from Cincinnati. This girl had dressed rabbits a few days before becoming ill.

In 1919, Dr. Edward Francis of the U. S. Public Health Service started his investigations on the disease known in Utah as "Deer Fly Fever." He was soon able to prove that it also was caused by *Bacterium tularense* and that the jack rabbit was the chief source of infection. Thus Dr. Francis was able to show that the causative organism in the diseases known as deer fly fever, fly-bite fever and tick fever was the same as that found in the ground squirrel epidemic in California and the human conjunctivitis cases in Cincinnati, Ohio. He named the disease caused by this organism, "Tularemia."

All rodents are susceptible to infection by *Bacterium tularense* and act as carriers. The bacterium is transmitted from animal to animal by the bite of fleas, ticks, lice or flies. In the West the jack rabbit is the most common source

of infection for man. In the East the common cotton-tail rabbit is the usual carrier.

The infection in man is usually acquired directly by handling the flesh of diseased rabbits. However, it may be transmitted from animal to man by the bite of blood-sucking insects such as the horse-fly and the woodtick. Parker and Spencer<sup>3</sup> have shown that the wood-tick can pass the infection along to the next generation through its eggs. Due to this fact the tick is a permanent reservoir of infection, perpetuating it from generation to generation.

Infection may occur during any part of the year, but in Illinois, the most common time for the disease to appear is during the open season for rabbits. Most cases therefore occur in November, December and January.

Certain occupations play an important part in exposure to infection. The disease is most often found in the families of farmers. Hunters are often infected. Housewives and cooks who handle infected animals are in great danger of infection. Market men and butchers get the disease while handling infected rabbits. The first case reported from Washington, D. C., in 1921, was in a market man. Laboratory workers almost always acquire the infection and usually have the typhoidal type. It is probable that many cases of the typhoidal type occur outside of the laboratory but have not been recognized.

The prognosis is good as to recovery. There are few complications and no sequellæ of any importance. The death rate cannot be accurately established yet but seven deaths have been recorded in two hundred and twenty cases. The prognosis is most doubtful in the oculoglandular cases. Three out of four cases of this type occurring in one family.

The disease is not contagious except under most unusual circumstances and one attack confers immunity.

The diagnosis is easily made if the patient gives a history of having been bitten by a blood-sucking insect or of having handled rabbits and presents the usual clinical picture. With this history the diagnosis can be settled conclusively by means of the agglutination test made on blood serum collected from the patient after the first week of the disease, or by animal inoculation. The organism cannot be found in smears made from the initial lesion or from infected glands.

The agglutination test shows nothing during the first week but becomes positive in the second week and remains positive indefinitely. Patients who have had the disease as long as eighteen (18) years ago still show positive agglutination tests.

In the differential diagnosis septic infection, sporotrichosis, anthrax, glanders and typhoid fever must be ruled out. The agglutination test presents the easiest and surest method of disposing of these difficulties.

Treatment so far accomplishes very little, so prevention is of far more importance. The disease may be avoided by using rubber gloves when handling or dressing animals which may carry the infection. Flesh from animals capable of acting as carriers should be thoroughly cooked as this destroys all infection. Particular care should be exercised in using these preventive measures when an epidemic is known to exist in wild rabbits. Such an epidemic is usually caused by *Bacterium tularensis*.

Active treatment consists principally of rest in bed and good nursing. The initial lesion does best with moist dressings and healing seems to be more rapid if the base of the ulcer is cauterized frequently with pure phenol. If suppuration occurs in a gland it should never be incised until softening is complete and the overlying skin is very thin. If incision is done earlier than this healing is greatly delayed and may not be complete for months. No vaccine or curative serum is available.

#### CASE REPORTS

*Case 1.*—Mrs. I. D. L., Lawrenceville, Illinois; aged 44 years; housewife. Illness started November 1, 1914. I saw her first on November 4. She was very ill, fever 103, general muscular pain, severe headache and vomiting. One of her sons had died three months before this after a severe case of typhoid fever and she was sure that she also was developing typhoid. Examination disclosed a severe axillary adenitis on the left side; also, an adenitis on the inside of the arm just above the elbow. There was a small papule on the distal phalanx of the fourth finger, left hand. In a few days the skin covering this papule became necrotic and on removal disclosed the typical punched-out ulcer. Healing occurred in this ulcer in about one month. During this time the patient was confined to bed running a temperature from 100 to 104 degrees. The axillary glands and those above the elbow were about as large as English walnuts and were very sensitive. On December 23 complete softening had occurred in these glands and they



were incised and drained. They healed in two weeks. This woman was very weak for two months after her illness, but otherwise made an uneventful recovery. My diagnosis in her case was "Septic infection—cause unknown." This was the first of a series of cases of this type which later came under my observation. It was different from any infection I had ever seen and no description could be found for it. Serum from this case was sent to the Hygienic Laboratory of the U. S. Public Health Service at Washington, D. C., on December 27, 1926. It agglutinated *Bacterium tularensis* in dilutions of 1:10 and 1:20. This cleared up the diagnosis 12 years after the patient had the disease.

*Case 2.*—Mrs. E. H., Lawrenceville, Illinois; aged 43 years; housewife. Stuck small bone in distal phalanx, index finger, left hand, on November 24, 1919, while cleaning a hog's head. On November 26 she had a severe chill, temperature 104, intense general aching and headache. Two or three days later a marked adenitis appeared in the left axilla. A papule developed at the puncture wound on the index finger. The papule soon broke down leaving the usual ulcer. This was the most sensitive ulcer that I have ever seen. The slightest pressure on its base, which was very red, caused intense pain. It healed in five weeks. The patient was in bed one month. Her convalescence was prolonged and the prostration was pronounced. The axillary glands remained enlarged and very hard for five months and then softening commenced. On May 15, 1920, softening was complete and the glands were incised. The principal points of interest in this case were: The severe sweats during the febrile period; the marked prostration during convalescence; and the prolonged glandular involvement before suppuration occurred. My diagnosis was "Septic infection of unknown type." Serum from this case examined on November 24, 1926, agglutinated *Bacterium tularensis* in dilutions of 1:10, 1:20, 40, 80 but not in higher dilutions.

*Case 3.*—Mr. H. C., Lawrenceville, Illinois; aged 68 years; farmer. Became ill on July 5, 1925, with all the symptoms of influenza. After this he had chills and fever for three weeks. A few days after becoming ill an adenitis developed in the inner aspect of his right thigh a few inches above the knee. The glands in the right groin next became enlarged and tender. He next noticed an ulcer on his right shin four inches above the angle. He remembered having scratched an insect bite in that region a few days before becoming ill. He was confined to bed for three (3) weeks after which he was able to get around, but was extremely weak. Meanwhile the leg ulcer did not heal and the glands were getting worse. I saw him first on August 25, 1925, and on August 28, incised the glands above knee and in groin. These were incised too soon. Complete softening had not occurred and it was one month before the wounds healed. The first diagnosis in

this case by the family physician was "Influenza." Later he was told that he had an infection. Serum from this case examined on December 28, 1926, agglutinated *Bacterium tularensis* in dilutions of 1:10 to 1:160.

This man had been in the habit of dressing young rabbits caught in the harvest fields. He probably scratched insect bites on his skin while his finger nails were contaminated after handling the flesh of an infected rabbit.

*Case 4.*—Mrs. M. M. R., St. Francisville, Illinois; aged 65 years; housewife. Illness started with chill and high fever on December 15, 1925, three days after dressing rabbits. Was ill one month with usual symptoms. A few days after becoming ill she noticed enlarged glands under left arm and an ulcer on her left thumb. Her family physician made a diagnosis of septic infection. She declares that she had typhoid fever. I saw her first on February 1, 1926. The ulcer on the left thumb was not completely healed. She still had marked enlargement of the axillary glands and was very weak and hardly able to get around. The glands did not suppurate and were almost down to normal size by March 1, 1926. Serum examined December 2, 1926, agglutinated *Bacterium tularensis* in dilutions of 1:10 to 1:320.

*Case 5.*—Mr. W. G. S., Lawrenceville, Illinois; aged 46 years; farmer. Skinned rabbit on October 19, 1926. Became ill on October 22 with fever, chill, general muscular pains and soreness. Had aged 43 years; wife of farmer reported in *Case 3*. On October 19, 1926, Mrs. W. G. S. cut up and days after becoming ill noticed enlarged glands in left axilla followed by appearance of papules on dorsal surface, proximal phalanx of left thumb and in a like position on left little finger. From these papules the usual ulcers developed. The febrile period lasted two weeks and was followed by marked prostration and a slow convalescence. This case and the next two cases reported were treated by Dr. Schrader of Bridgeport, Illinois, who made a diagnosis of septic infection. On November 12 this man came to my office for an examination. He was uneasy because the ulcers refused to heal and on account of the adenitis with its usual pain and tenderness. On account of the typical tularemia history and symptoms I sent a sample of blood to Dr. Francis at the Hygienic Laboratory of the U. S. Public Health Service. The serum agglutinated *Bacterium tularensis* in dilution of 1:10 to 1:640, this confirming the diagnosis of tularemia. This was the first case of the disease reported from Illinois.

*Case 6.*—Mrs. W. G. S., Lawrenceville, Illinois; severe headache. Temperature was 103. Three fried the rabbit dressed by W. G. S. She became ill on October 22 with the usual symptoms. Febrile period lasted two weeks during which time she was confined to bed. Thinks she had some fever after getting up. Had infection around thumb nail and all of finger nails on left hand. Most severe ulcer

developed beside nail of ring finger. Ulcers almost healed by November 24. Glands above elbow about size of walnut on November 24 and axillary glands also involved, but not so large. Two weeks after illness developed an eruption appeared on back between shoulders and on back of left wrist. This consisted of eight slightly raised and indurated red spots about three-eighths inch in diameter on the back and six similar spots on the wrist. This patient had several severe sweats while confined to bed and had the usual prostration after getting up. I requested Dr. Schrader to have her blood examined which he did on November 20. The serum agglutinated *Bacterium tularense* in dilutions of 1:10 to 1:1280.

*Case 7.*—R. S., Lawrenceville, Illinois; son of W. G. S.; aged 11 years. On October 19, this boy picked up the rabbit which his father had dressed and examined it. He became ill on October 23 with the usual symptoms. His fever soon reached 104 degrees and he was delirious. On the next day glands under left half of lower maxilla started to swelling and by October 26 the glands under the right half of the lower maxilla were also involved. This extended down the neck. Several ulcers had appeared meanwhile around the lower teeth—on the insides of the cheeks and under the tongue. His mouth was very sore and he could not eat. Confined to bed one week and had fever for two weeks. On November 24 the glands under the lower maxilla were still large and indurated and there was some enlargement of the glands in both axillae. This was most marked on the right side. Blood examined on November 26 agglutinated *Bacterium tularense* in dilutions of 1:10 to 1:1280.

Suppuration has not occurred in any of the glands involved in the last three cases reported.

The unusual feature of the last case reported is the mouth infection. It is the only one recorded so far as I can find and was either due to direct contamination of the mucous membrane by the fingers after handling the rabbit or to eating meat that was insufficiently cooked.

#### CONCLUSIONS

1. Tularemia, while not causing many deaths, is a serious disease causing much suffering and loss of time.

2. It can be prevented by properly protecting the hands (rubber gloves), while handling rabbits and by thoroughly cooking flesh from animals which may convey the infection.

3. The rural physician is not the only member of the medical profession who is likely to see the disease. One case was diagnosed as "Cholecystitis" by a Washington, D. C., gastro-enterologist and operated on by a Washington, D. C., surgeon. They later made the correct diagnosis. The first cases of the disease on record were

worked out by a group of ophthalmologists from Cincinnati, Ohio.

4. Tularemia is not one of the medical curiosities. On the other hand it is a fairly common disease in Illinois, and has been since 1914, as evidenced by the case reports given above. These represent not more than half of the cases which have come under my observation in one community, and Dr. V. M. Brian, District Health Officer of the Twelfth District of Illinois, who saw the last three cases reported on November 22, 1926, tells me that he has found fifteen other cases in his district since that time.

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### TREATING THE SYPHILITIC

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The treatment of a person who has contracted syphilis should include the following features:

The diagnosis must be established by clinical and laboratory methods. It is better to be a little deliberate than to be hurried, and to so thoroughly establish the diagnosis and record the symptoms that for ever afterward one can be sure of his ground. Dependence upon a single Wassermann is criminal. It is also important to bear in mind that syphilitics may suffer with other affections so that it is possible that the practice of instituting anti-syphilitic treatment as a means of curing every illness that affects these persons will result in final disappointment.

There must be established between the physician and patient a sincere confidence and respect for one another. The patient's future is going largely to depend upon his faithfulness to the advice of his attendant and the conscientious service this attendant renders.

An important feature in handling these patients includes instruction regarding the contagiousness of the disease, and his responsibility toward society in general and to those close to him, in particular. That patient who is not intelligent enough to grasp the details, or humane enough to assume responsibility of controlling



the exposure of others from contagion by himself is a bad man and should be quarantined or imprisoned. The physician has an important duty to encourage and insist upon a maintenance of care in this regard all during the period of treatment.

The financial phase of the treatment must be gone into thoroughly and from the very onset the patient must have a plan for financing his treatment. He must stick to this plan religiously. Inasmuch as the physician is rendering very full value it is impossible for him to assume to carry any part of the financial burden for one or many patients. Any physician or patient who does not realize the strain that this is going to be upon the patient's patience and finances are ultimately going to come to an abrupt interruption of the treatment.

The patient must be instructed that even though the attitude will be cheerful, still the physician is carrying a heavy responsibility at all times and there will be serious problems confronting him at every step in the progress of the case. At no time does the treatment become a routine hit or miss procedure.

It is well that the patient realize that he is buying his own future. He must be faithful to all instructions, he must take the risk attached to the administration of very strong medicine, and the personal peculiarities that may be inherent in his own particular case. He must be under the continuous observation of a skilled personal physician.

Syphilis is not a fatal disease, in itself, as seen in The United States. Practically every syphilitic will live and spend future years in some sort of health. The advantage of treatment wisely and personally given is that it should add to the probabilities that these future years are to be increased and happier. It is possible that treatment given without full consideration of the possibilities and a knowledge of the particular case may be injurious.

Medication we have purposely placed last because we wish to place emphasis upon the fact that there are several other very important factors included in the treatment of these patients if the treatment is to be complete. We meet many physicians who believe and who teach that the treatment of these patients is a purely rou-

time proceeding in which a positive Wassermann is to be followed by a series of injections, which may be given almost irresponsibly by any technician. Except for the ignorant or the poor, we cannot see how any one can feel that this constitutes the treatment for so serious an ailment.

The medicines used at this time combine a suitable application of spirocheticidal agents, chosen according to the peculiarities of each case, tonics, remedies that may be demanded to meet special symptoms that may arise in connection with the skin, the mouth, the eyes, the nervous system or the stomach. At times protein injections must be resorted to.

Hygienic treatment must include proper attention to the mouth, avoidance of dissipation, fatigue and mental stress.

The patient must choose between a private physician from whom he may reasonably expect personal attention or one of the large corporations operated by laymen who employ technicians and physicians to do the necessary parts of examinations and treatment.

We have had the opportunity of observing several of the larger clinics and institutions that engage in the wholesale treatment of this disease. It soon impresses an observer that there is no personal interest in the individual patient, and because there are so many persons concerned in each treatment, no one feels any great responsibility.

The wholesale institutions draw their patrons by employing clever advertising men, and by emphasizing the cheapness of their service. They also make considerable of the fact that they treat great numbers of patients. None of them base their claims or seek patronage upon the quality or value of the services rendered. The first contact is made through the efforts of the advertising department. The patient visits the institution and meets a layman clerk who assigns him to either of several attending doctors. He is sent along in a groove for a Wassermann; if it is found positive he is continued in the same groove for a certain number of injections of this or that, administered by whoever happens to be on duty when he arrives each time. Quite often the one who decides that a certain patient is to receive a certain course of treatment does not make an examination. We have

seen patients with veins very hard to enter, ordered to have a course of intravenous injections, and the technicians have struggled hard to carry out the orders while they tried to reach some one higher in authority who would change the order so that intra-muscular injections might be substituted.

Observing the work of these wholesale institutions convinced the writer that the lack of personal responsibility, and the reduction of treatment to a routine is not the ideal treatment of syphilitic patients. It is probable that for the very poor and the less intelligent such service is as good as can be had. For intelligent persons it is unthinkable.

It is necessary while treating these patients that the physician should be able very readily and at any time to summarize just what has been done for the patient. Because of the differences in handwriting and the method of making histories we have noted that it was very hard to do this in many instances, in large clinics where many persons enter at one time or another into the course of treatment.

The corporations that engage in this business are controlled usually by laymen. As they are unrestrained by the ethics of our profession they utilize almost every means of building up as large a clientele as possible. A nominal fee is charged each patient. This fee the sick man probably feels goes to pay for his medical care but probably as a matter of fact less than twenty-five per cent of the income of these institutions ever reaches any trained physician. It is a case of a sick man paying advertising, rent, clerk, hire, etc., with the larger part of the small fee he does pay. A capable technician should give five injections an hour, or thirty in a six-hour day, provided he does not need to stop to pay too much attention to each patient's peculiarities. Then the patient really pays for one-thirtieth of a hurried man's day. He should not be asked very much for such service.

Incidentally we are witnessing the development of a group of anti-syphilitic technicians. Those engaged in this work are working by routine, they are not developing broader knowledge even of the one subject of syphilis, to say nothing of medicine as a whole. As advisors to individual patients their services are probably worth but little. Still if some have their way

the treatment of syphilis is a routine and technicians are all that is required for its treatment.

Treating syphilis is not altogether a community problem. It is always a very personal problem. The cost cannot be reduced below that which will insure personal service, and then expect such service. We believe that a sane view of the subject of cost can only be obtained upon this basis. If the patient knows that he is receiving standardized routine treatment, and he still wants to continue it, we have no argument with him. The point is, he should be told the differences and why private physicians are entitled to reasonable fees for treating this disease.

We do not believe that the treatment of syphilis has yet been perfected. It is dependent upon chemotherapy, using agents that are far from safe and none too sure. It may be that the future will show that there is a better way just as the chemotherapy for tuberculosis has been supplanted by better methods in which the body itself is caused to subdue the infective agents. We therefore censor those physicians who have reached a stage of lethargy in studying this disease and believe that from now on and forever it is a routine that can be carried out by Tom, Dick or Harry.

In conclusion, we wish to say that the establishment of standard fees for treatment is wrong. Just as the younger men and those who render less complete service in obstetrics charge low fees while those with great equipments and experience are justified in charging high fees, we believe it should be in this field. The patient should pay according to the value of the service he receives, and if he is unable to pay for the services of the highest trained specialist he can still receive practical and personal treatment from those who are able to render it. The physician who believes that he is justified in charging all the patient can stand is betraying his calling, and those physicians who are afraid to reduce the charge to meet the means of their patients because they feel that there is an established charge are missing an opportunity to improve their own skill and make friends that should be valuable in the future. We believe it would be better for all concerned if a private physician could handle every case of syphilis throughout the entire course of treatment.

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## SPASMOPHILIA

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Spasmophilia is a condition which usually goes hand in hand with rickets. They are first cousins, soul mates or something of the sort; where you find one, you find the other. On the other hand, where you do not find one you do not find the other. In Japan rickets seldom shows its face; in Japan spasmophilia is a comparative stranger.

*Etiology.* Heredity is important. Convulsions are often enough a familial affliction. Try the facial test (mentioned later) on the mother. Season. More in winter and spring and especially March to May. The child suffers a respiratory injury on account of having been indoors too much. Bottle fed babies are practically the only ones affected. This is very important. Age. Generally not before fourth month, and most cases are between sixth and fourteenth months. Infectious diseases, digestive and nutritional disorders provoke attacks in those predisposed. Parathyroids may have been injured. (Theory.)

*Latent Tetany* or the tetanoid condition should be mentioned. The muscles are in a state of hyper-irritability. The facial phenomenon is elicited by tapping on the cheek. It causes a quick contraction of the facial muscles. By tapping on the masseter alone we may be able to produce an isolated contraction at outer canthus of eye. When the child laughs or cries we cannot develop the sign, because the facial muscles are under nerve control. Another sign is developed by placing a tourniquet around the arm and leaving it in place two or three minutes above elbow. The hand becomes fixed in a spastic condition, the "obstetric position," from which it can be released only with some difficulty.

## TYPES OF SPASMOPHILIA

1. *Laryngospasm or Respiratory Spasm.* The attack may be slight, merely a moderate whoop, or a crowing inspiration. The severe attacks are very dangerous. The face becomes pale, head goes back, respiration ceases and unconsciousness ensues with the child lying quite still. Suddenly the spasm relaxes and the child gradually begins to breathe. Death may occur during an attack, due to heart stoppage, and on this account artificial respiration is unavailing, since the death is not due to a sphyxia. Twenty or more attacks may

occur in twenty-four hours. Laryngospasm may pass into a general convulsion. The attacks are provoked by excitement, large meal, etc. Laryngospasm is seen in rickety children and does not occur after age of two years.

2. *Eclampsia or General Convulsions.* Slight attacks may occur, during which the child appears vacant, face turns pale, twitching of face, etc. The genuine attack resembles an epileptic fit. Consciousness is lost, pupils do not react, the muscles of body jerk, tongue is bitten. The attack lasts one-half to two minutes, rarely three to five minutes. Attacks may follow each other rapidly, a status epilepticus. In such cases a high fever develops, due to irritation of heat centers. Fever is not found in any other form of spasmophilia. The child sleeps after an attack, the same as in epilepsy. Attacks are provoked by digestive disturbances, tympanites, febrile diseases, etc. Teething spasms usually mean spasmophilia. The process of teething causes just enough disturbance in a child of this type to provoke a spasm. Many a child believed to be an epileptic recovers toward puberty, and in such cases spasmophilia and not epilepsy was the cause of the fits. These general convulsions due to spasmophilia do not occur prior to third month.

3. *Tonic Muscle Spasms.* The "obstetric hand" is an example. The thumb is wedged inward between the fingers, and wrist is flexed. May persist for hours and lead to edema on back of hands. The feet may assume a spastic posture and this may persist for hours and lead to edema. The face may be spastic, giving the child a pinched, troubled expression, while the lips may be drawn resulting in the so-called fish mouth. Spastic strabismus may occur and spasm of muscles of the neck may lead to opisthotonos. Add to this unequal and sluggish pupils caused by involvement of musculature of the iris, and the case resembles meningitis. The muscles of arm, leg, trunk, etc., may be tetanic. Spasm of neck of bladder may embarrass urination, and bladder may become distended. Laryngospasm or eclampsia may occur along with tetany of muscles, or the muscle tetany alone may persist for days or weeks, especially in children who are undernourished or cachectic. As a rule there is no pain in connection with these persistent contractions.

4. *Broncho-Tetany.* Here we have dyspnea and cyanosis due to spasm of bronchial muscu-

lature. It may persist for days or weeks and may lead to edema and atelectasis of portions of the lungs. May develop into broncho-pneumonia. Many cases are fatal.

5. *Gastro-Tetany.* This is a classification of my own and may not meet with your approval. I have observed several cases in which it seemed that a spastic condition of the stomach was associated with spasmophilia. I will cite the most pronounced one. About three years ago I was called to attend a baby of one year. The chief complaint was vomiting which had persisted for six months. It did not occur every day but almost every day. Sometimes there would be a period of a week's freedom; sometimes it occurred several times a day. There was evidence of rickets in this bottle-fed baby, there being a wide-open fontanelle, only two teeth and the facial sign of tetany. There was no real evidence of pyloric stenosis and the age of onset (sixth month) was against this. After considering all the usual causes of infantile vomiting it seemed that it might be due to a gastric tetany. I took the baby to Dr. W. J. Wanninger who made x-ray observations and found a very marked spasm at pyloric end of stomach. The peristaltic waves were exaggerated. The meal did not begin to pass through readily, but finally after a delay of fifteen minutes it began to pass and at the end of the normal time the stomach was empty. The baby vomited during the observation. More convincing than the x-ray observations was the result of treatment. At the end of three weeks the vomiting had almost entirely ceased and a little later it stopped entirely and did not return. In this case cod liver oil and phosphorus, together with proper diet and plenty of out-doors and sunshine constituted the treatment. The quartz light was also used. Of course just a few swallows do not make a summer, but they do make a little noise. I believe that cases of this sort should be carefully studied for signs of rickets and spasmophilia, for it may be of utmost importance as regards treatment.

*Cardiac Death.* In all forms of spasmophilia sudden death may occur due to stoppage of the heart. It is usually in those with laryngospasm. Children in the status lymphaticus or status thymico-lymphaticus are especially in danger. The cardiac death may occur independent of any acute spasm, and usually after a large meal.

These deaths are thought to be due to tetany of the heart.

*Course.* In spasmophilia the entire disease picture does not rapidly disappear, but special symptoms usually respond quickly. Sometimes a case will recur if cow milk is given again, after having been discontinued. The disease may disappear in summer only to recur in winter. Those cases which have general convulsions may later in life show neurotic tendencies or mental defects. It seldom passes into true epilepsy.

*Differential Diagnosis.* Laryngospasm may occur in connection with meningitis. Convulsions occurring before age of three months are usually due to brain lesions and most cases are due to cerebral hemorrhage following a difficult labor. A few may be due to improper feeding. Spasmophilic convulsions are almost never seen before age of three months and there is generally no outcry. Paralyzes or pareses after a seizure point to an organic lesion.

*Treatment.* In laryngospasm avoid everything which will tend to frighten or excite the child. In urgent eclampsia chloroform may be used cautiously; chloral hydrate and bromides per rectum; lumbar puncture. In all types of spasmophilia, the following: Get the child off cow milk if possible. If this is impossible, then give as little cow milk as possible, and increase carbohydrates, and in children five to six months old, vegetables properly prepared, vegetable soup, toast, cereals, etc., may be cautiously started. Human milk is of course always of great advantage. Sunlight and fresh air are of great importance. Internally may be administered in one mixture, sodium bromide, parathyroid and calcium lactate, the latter in large doses, as these patients are low on calcium. Continue this mixture until the danger period seems passed. At the same time start cod liver oil and phosphorus and continue it for eight to twelve months with the exception that after using this latter combination for two months it is well to then omit the phosphorus for one month, and then start with it again for two months. In the interval the cod liver oil may be used alone. The plain cod liver oil or the oil with malt may be used in making up the phosphorus combination. In very hot weather and if diarrhea be present in a case, the cod liver oil should be used sparingly. In a series of observations extending over a period of



fourteen years, the writer considers the cod liver oil and phosphorus combination extremely valuable but not to the exclusion of sunlight, fresh air, diet, quartz light, etc. Diet should be salt free. The quartz lamp is very valuable in preventing rickets and spasmophilia, and also in treatment. It should be used every day over a considerable period.

*Discussion of Cases.* Especially interesting are the cases of late rickets which show symptoms of spasmophilia. Late rickets occurs at the age of five, six, seven years or even later, so you see it is not necessary to have a very young child in order to be dealing with rickets. The latter leaves its mark for years to come, provided it has not been properly handled. We find in these children various nervous conditions such as restlessness, irritability, insomnia, tenseness of muscles, etc. However in some of them the appearance of the patient is very deceiving, for they look and act fine most of the time. Then the past history, such as late walking, late dentition, bottle fed baby, large, square head, pigeon breast, etc., are significant. I have treated eight cases of late rickets with general convulsions. These convulsions were unaccompanied by fever. Three of these children were seven years of age, looked and acted well, but had convulsions and the convulsions were exactly like epilepsy. They were cured of their fits by the prolonged use of cod liver oil and phosphorus, together with other means mentioned above. The quartz light was used in only three of them. In cases where I am not at all sure as to the diagnosis and where I especially fear that it is epilepsy, then I give the patient the benefit of the doubt and use the cod liver oil and phosphorus as usual, and give luminal also. After a number of months the luminal is gradually withdrawn. If the fits continue, it is given again and only after six to eight months use of the oil and phosphorus do I feel satisfied to give it up, in the event the convulsions continue. If the case is permanently cured, then the natural conclusion is that it was not epilepsy. In late rickets with convulsions, the seizures are usually infrequent. Cases resembling gastro-tetany might be treated awhile along these lines. Have handled a number of cases which appeared to be broncho-tetany and which did better under treatment directed toward this condition than they did under any other treatment. The nodding spasms of infancy, "teething

spasms," cases which show short "absences," and the laryngeal cases which show nothing more than a crowing inspiration should all excite a suspicion of spasmophilia. Also the infant which shows an intention tremor. Such babies have tense muscles and they tremble when they start to do anything.

So, let us not forget that rickets and spasmophilia are accompanied by a toxemia due to malnutrition, and this toxemia may follow the child for years. Let us examine all these nervous, jumpy children for signs of rickets and spasmophilia. Remember that teething does not cause spasms, but it does add just a little more insult to a child already badly upset by spasmophilia. And, by all means let us not be too hasty in making our diagnosis of epilepsy. At least prove that it is epilepsy, and in excluding the conditions which cause fits, do not forget spasmophilia, especially in these older children. Epilepsy is a terrible thing and the results of treatment are not brilliant. You will feel mighty good if now and then you are able to cure a child which bears the stamp of epilepsy, and the parents will never forget the physician who succeeds in bringing about such a result.

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## TONSILLAR HEMORRHAGE

WITH STATISTICAL DATA ON 417  
TONSILLECTOMIES\*

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Personal knowledge of two deaths recently from tonsillar hemorrhage has prompted the writer to review this subject. In each case little consideration was at first given to the bleeding until a critical stage developed when heroic measures were of no avail. Both cases were children and in each case exitus occurred within less than 24 hours after the operation.

The aim of this paper is to emphasize the possible dangers of hemorrhage with a tonsillectomy which is by most operators considered a minor operation and which is performed with impunity, recklessness and disregard of any bleeding. The removal of tonsils and adenoids is one of the com-

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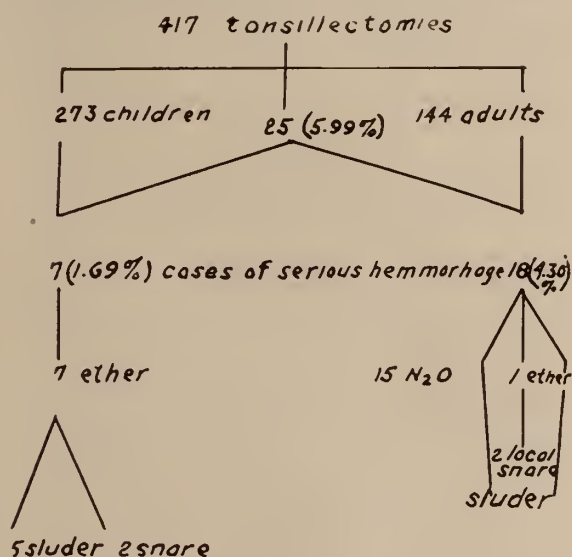
monest operations performed and is generally considered one of the easiest. Callahan aptly states, "Nature has been kind to this department of surgery. In no other part of the body would arteries of similar size be severed with such impunity and left to themselves."

That hemorrhage in tonsil operations is a real danger is strikingly apparent when we survey the literature. G. H. Cox in his careful survey of the literature shows a considerable number of fatalities from hemorrhage alone. J. Wright in 1890 reported 31 serious cases of tonsillar hemorrhage which were not fatal, and Harmon Smith in 1903 reported 24 additional cases. Bailey in 1922 sent out a questionnaire and received replies from 350 laryngologists in the U. S.—27 operators each reported a death from tonsillar hemorrhage. H. W. Loeb in 1923 through a confidential questionnaire to specialists obtained the following statistics of unreported deaths following tonsil operations. There were 62 deaths from hemorrhage, 19 from general sepsis, 7 from meningitis and 20 from undetermined causes. Cox gathered all told a series of 261 cases of alarming tonsillar hemorrhage with fatal outcome in 125 instances. From these appalling figures we can tremblingly speculate on the number of undisclosed cases with serious and fatal sequelae. From the known statistics it is very obvious that tonsillar hemorrhage is a real danger and that we cannot afford to neglect any reasonable precautions.

The entire arterial supply of the tonsil comes from the external carotid artery. The superior pole is supplied by the descending palatine branch of the internal maxillary, the middle and external portions from the ascending pharyngeal and ascending palatine arteries and the lower fossa by the dorsalis linguae. No large vessels supply the tonsil. The larger vessels are situated external to the capsule. According to Coakley the return venous supply is composed of a rather large plexus of veins which lie between the capsule and superior constrictor muscle of the pharynx. There is a confluence of veins towards the lower pole of the tonsil. Poynter has found that from this point a large vein leads outward to join the pharyngeal plexus or opens directly into the internal jugular vein. He points out that in this region a dislodged septic clot may cause a lung abscess. We note that the posterior pillar

and lower pole of the tonsillar fossa represent the danger zone for tonsillar hemorrhage.

Etiologic factors in the causation of tonsillar hemorrhage are completely summarized by Cox as follows: 1. Abnormalities in the distribution of the larger blood vessels supplying the tonsil. 2. Traumatism—injury to the tonsillar pillars and superior constrictor muscle. 3. Anemia. 4. Menstruation and pregnancy predispose to post-operative bleeding. Marschik and Otto J. Stein each reported cases of alarming tonsillar hemorrhage in menstruating women. The writer



recently performed a tonsillectomy on a woman who had a severe tonsillar hemorrhage occurring simultaneously with her menstrual flow on the 4th day after operation. 5. Arteriosclerosis and nephritis predispose. 6. Acute tonsillitis. Moure reported a case of hemorrhage after tonsillotomy during an active tonsillitis. 7. Fibroid tonsils are more likely to be followed by severe hemorrhage. Fibroid tissue prevents contraction of arterioles. 8. Acute infectious diseases. F. E. Hopkins reported a case of severe bleeding on the 1st and 2nd day after operation. The child showed measles on the 3rd day. 9. Active syphilis. 10. Adults more prone to hemorrhage. 11. Sex-alarming bleeding is more common in males than in females. In Smith's report among 54 cases only 8 were women. 12. Sloughing of vessel wall from low grade infection produces secondary tonsillar hemorrhage. 13. Hemophilia.

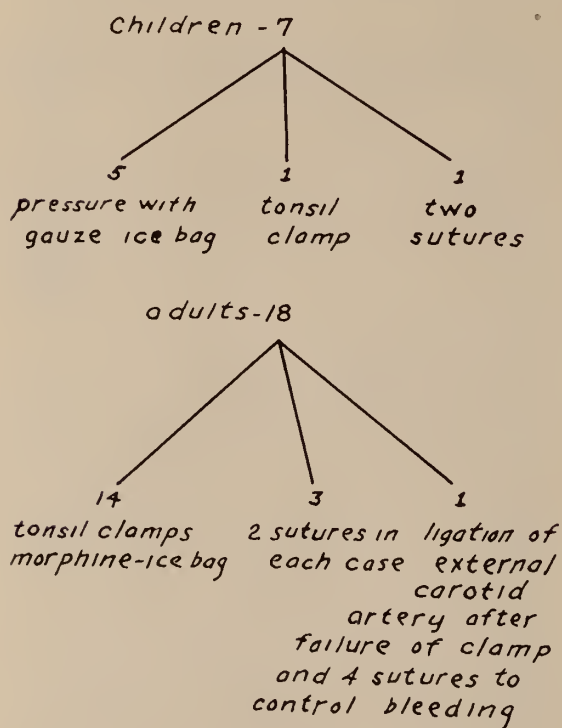
The determination of coagulation time which is now a routine procedure in all recognized hospitals has no practical value except to put the



surgeon on guard when the coagulation time is unusually long. Richards in his study of 500 tonsillectomy cases found the coagulation time varied from 2 to 8½ minutes. The six cases of alarming hemorrhage which occurred in this group had a coagulation time not over 4½ minutes. Kerr Love calculated an average loss of 4 oz. of blood in uncontrolled bleeding which ceased without interference. He remarks, "control bleeding in every case at time of operation and thus save the child blood it can ill spare." Dickie argues that many of the children who undergo tonsillectomy are already thin and anemic and it is precisely in these cases that the loss of blood should be avoided.

The value of careful and consistent routine

#### *Treatment used in bleeding cases*



operative technic in controlling tonsillar hemorrhage to a minimum is well illustrated in the report of J. J. Rainey. Between Oct. 1, 1919, and Aug. 20, 1922, he performed tonsillectomies on 978 patients (700 private cases). All cases were given general anesthesia. Ligation was used as a routine procedure in the majority of the cases. He had only 3 cases of hemorrhage of any moment, two were in adults and one in a child from adenoids which stopped spontaneously. Rainey

considers the coagulation time and the giving of calcium lactate of no value. He found that most blood was lost by the young and healthy males between 18 and 35 years and the least by slender women between 30 and 60 years. Furthermore, in his cases the most vulnerable regions for hemorrhage were in the upper part of the tonsillar fossa, high up and deep seated in the muscle of the supratonsillar fossa and from a vessel just inside of the posterior pillar midway between the upper and lower poles.

A study of hemorrhage in tonsillectomies was made at the Lutheran Deaconess Hospital. The incidence of tonsillar hemorrhage in 417 tonsillectomies performed during the months of July, August, and September, 1923, is outlined below. This period was chosen because of the available hearty cooperation of Dr. M. Lichtenstein, interne on the nose and throat service during those months, in carefully reviewing the records. The statistics include only serious hemorrhages or hemorrhages which required special efforts to control after the general measures failed. The various forms of anesthesia and methods of operation employed are indicated diagrammatically. In this series one case required ligation of the external carotid artery. There were no deaths.

1. Total number of tonsillectomies in 3 months, July, August, and September, 1923—417.
2. No. of children under 14 years—273.
3. No. of adults (over 14 years)—144.
4. No. of serious tonsillar hemorrhages—25 or 5.99%, of which there were 18 adults or 4.30%, and 7 children or 1.69%.

#### CONCLUSIONS

1. Tonsillar hemorrhage may be a serious danger and careful efforts should be made to control it before the operation is considered complete.
2. Tonsillar hemorrhage has produced numerous deaths which in many instances were avoidable.
3. The majority of serious tonsillar hemorrhage are operative and not postoperative.
4. The most frequent causes of tonsillar hemorrhage are traumatism to pillars and surrounding muscles and failure to surgically control the bleeding vessels at the time of operation.
5. The application of artery clamp and ligation is the only satisfactory method of controlling tonsillar hemorrhage.
6. Blood transfusion is valuable and almost a

specific (according to Rufus E. Stetson) in the control of some cases of tonsillar hemorrhage.

7. The external carotid artery should be ligated in uncontrollable cases. The common carotid can be ligated as an extreme measure in spite of the possibility of serious effect upon the brain function.

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### SOLITARY CYST OF THE KIDNEY\*

#### Report of Case

JOHN R. VONACHEN, M. D.

AND

ARTHUR SPRENGER, M. D.

PEORIA, ILLINOIS

In a review of literature covering the field of urology there is a dearth of articles covering the phase of that specialty in children. The chief reason for this apparent neglect of urological work in the young is primarily, a lack of co-operation between pediatrician and urologist. A closer contact between the two will result in a solution of many of the perplexing problems confronting both.

Instruments have been perfected with which examination can be performed with great ease. A child of a few weeks may be cystoscoped—a routine urological examination may be done and definite diagnosis made.

From a review of the meager amount of literature extant we know that children are subject to a variety of ills of the urinary tract. Malformations, anomalies of various types, tumors and simple infections are their heritage. With the assistance of the pediatrician we are frequently able to restore these little sufferers to health.

This paper has a two fold purpose, a plea for:

a) greater co-operation between pediatrician and urologist.

b) more reports on urological conditions affecting children so that we may stimulate work in this particular field.

We know how frequently analysis of a child's urine discloses a pyuria without symptoms and how often a urinary antiseptic is given for a time, and with improvement the case is dismissed. This

child in later life develops the strictured ureter, the forerunner according to Hunner of many ills of the kidney, followed but too often by a pus kidney and nephrectomy.

*Incidence.* Solitary cyst of the kidney is a relatively rare condition and a particularly rare finding in children. Five cases have been reported in the literature dating back to 1861. This does not include a case of traumatic renal cyst reported by Bauman<sup>1</sup> in a child 6 years of age. Following is a table of cases appearing in children.<sup>2</sup>

Author	Age	Size	Treatment	Result
1. D'Antona	1	Large	Resection	Recovery
2. Bencke	4½	2 fists	Nephrectomy	.....
3. Rochet	1	Orange	Drainage	Recovery
4. Wagner	4	Inf. Head	Resection	Recovery
			Transplantation	
5. Weil, Moriaurd & Guardiers	8	Adult Head	Laparotomy	Death
6. Vonachen & Sprenger	2	2 liters	Nephrectomy	Recovery

Harpster<sup>3</sup> reported ninety-five cases, in which five appeared in children, the oldest eight years, the youngest one year of age. Since that time Smith<sup>4</sup> reported one hundred and twenty cases of solitary cysts of the kidney, including but three children in his list. From the above reports one can appreciate the rarity of this condition in children. Probably the disease occurs more frequently but remains undiagnosed.

*Etiology.* This condition is probably due to a congenital malformation. The point of origin according to many writers is the renal cortex just beneath the capsule of the kidney. According to Simon<sup>5</sup> many causative theories are advanced, but none are generally accepted.

*Pathology.* Solitary cyst of the kidney is a unilateral disease of the kidney in contradistinction to polycystic disease, which is a congenital bilateral affection. The cyst most frequently springs from the lower pole of the kidney. As the cyst enlarges compression of the renal substance occurs and with continued pressure, produces a marked atrophy. Dilatation of the ureter frequently occurs as a sequence of external pressure with the resulting dilatation of the renal pelvis. The cyst wall is very thin, surface usually smooth and glistening. The content of the sac is usually a straw colored fluid, although where a blood vessel in the cyst wall ruptures, a blood cyst results<sup>4</sup>. Recently a case of calcified renal cyst<sup>5</sup> has appeared in the literature. The cyst often assumes huge proportions, filling the entire abdomen.

*Symptoms.* These are varied and depend to a great degree upon pressure involving other organs. When the cyst attains an extremely large



size pressure against the colon may produce a constipation; pressure on blood vessels results in edema of the part supplied. Pain is not a common symptom and if present there is a sensation of weight and fullness. Usually there are no urinary findings, however, due to continued pressure on the ureter, stasis and dilatation develop with a resulting infection, and then pus and sometimes blood may be found. In children the diagnosis is frequently beset with many difficulties. When the tumor is large enough, diagnosis may be relatively simple, but with a small cyst this is practically impossible. Pyelography is of little value and an exploratory incision may be necessary. Cases have been reported in which intestinal obstruction has been due to the large size of the cyst as in the case of Bevers.<sup>6</sup> Hofer<sup>7</sup> reports a case of closure of common bile duct due to pressure from a large solitary cyst.

The onset in these cases is insidious. The symptoms in children are usually objective. When the cyst enlarges the abdomen becomes markedly distended. Frequently the child assumes a pasty color; loss of appetite and constipation follow. Dyspnea may be present, more marked if the cyst presses against the diaphragm. The tumor is smooth and percussion shows an increase in renal dullness. When the cyst is of moderate size the mass is usually very movable.

*Diagnosis.* Solitary cyst of the kidney may show certain difficulties in diagnosis, particularly if the cyst is small. It may be confused with polycystic disease, renal neoplasm, hydronephrosis, etc., but a careful history together with a complete urological examination will aid in the differentiation.

*Treatment.* In children as in adults treatment is purely surgical:

(a) resection of the kidney where tissue destruction is not great.

(b) nephrectomy where resection is impossible. Where compression has produced a marked atrophy, removal of the organ is the only alternative.

#### REPORT OF CASE

Baby Hugh, aged two years, male. Child was a normal full term baby weighing 8 pounds at birth. Breast fed for eleven months. Feeding history normal. Family history irrelevant. Three other children living and well. Father and mother in good health.

On March 1, 1926, the child became very ill. Temperature at that time was 105. The child was apathetic but cried severely when raised from bed.

Examination revealed a well nourished baby, nutrition if anything above par. Head, neck, and throat

were normal as were the heart and lungs. Central nervous system normal, no evidence of spasticity. There was a small swelling in the left lumbar region which was tender to touch. The mother stated at this time that the urine had a peculiar odor. No enlargement of spleen or liver. The abdomen was not markedly distended. Urinalysis showed a profuse number of pus cells with a few red blood cells.

The child was removed to hospital on March 3, 1926. Fluids were given in abundance. Sodium bicarbonate by rectum, alkalies by mouth. The child made progressive improvement within a week. Temperature subsided, urine examination showed a decided improvement, although the swelling in left lumbar region was unchanged. The child was sent home on March 10, still under observation. The following week the left side of the abdomen enlarged, bulging into the left flank and a tumor mass could be palpated. This mass extended into the pelvis and to the right lower quadrant of the abdomen. Fluctuation was present. Pressure symptoms developed at this time. Pain on urination and defecation.

The child was returned to the hospital on April 6 for further examination. April 6, skin dry and waxy. Temperature was 99. The abdomen was markedly distended. Tumor mass noted in left flank bulging markedly in the midaxillary between the lower border of the ribs and crest of ilium on left side. The mass extended well into the pelvis and over to the right side of the abdomen. There was dullness on percussion over the tumor. The abdomen was tense and the tumor mass was resistant. The urinalysis disclosed a moderate amount of pus and blood. Radiogram taken at this time showed a tumor mass bulging into the left flank, extending to the pelvis and right lower quadrant of the abdomen.

Cystoscopic examination disclosed a normal bladder. Right kidney functioned normally and urine from this side was negative. Owing to stenosis of the left ureter orifice, we were unable to obtain data from the left kidney. A diagnosis of renal neoplasm was made.

A left para-rectus incision exposed a smooth resistant mass extending from the left kidney region to the pelvis and right abdomen. Abdominal wound closed as it was deemed advisable to remove the tumor through a lumbar incision. The mass was exposed and two liters of fluid aspirated. Considerable dissection was required to remove the sac and kidney. Convalescence was uneventful.

The tissue removed was a large unilocular sac occupying the entire upper pole of the kidney. The pelvis was somewhat dilated and the ureter considerably thickened. The sac was rather thin and over the inner surface was smooth and glistening. There was no connection between the cyst cavity and the renal pelvis. The fluid was straw colored and negative to culture. Microscopically the cyst wall was composed of fibrous tissue. The remnant of renal tissue showed a marked cirrhosis, due no doubt to pressure atrophy.

#### CONCLUSIONS

1. Solitary renal cyst in early life is a rare occurrence.

2. Diagnosis is difficult, particularly with a small cyst.

3. Co-operation between pediatrician and urologist in cases of this type is essential.

4. Treatment of solitary cyst is purely surgical.

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\*Read before the Peoria City Medical Society, Nov. 16, 1926.

#### THE ROLE PLAYED BY PHYSICIANS IN THE DISCOVERY OF THE NEW WORLD

The important part played by physicians in Columbus' great discovery is not generally realized.

"La Chronique Medicale" for December, 1922, has an interesting article on this subject. It seems certain by documentary evidence that it was largely due to the intelligence and perspicacity of a Spanish provincial physician, that Columbus was able to go forth in search of the new world, instead of being confined in the awful captivity of the times, as a person of unsound mind. The account of this important incident in the life of Columbus is given as follows: Translated, this reads: "Another physician who played an important part in the life of Columbus was a simple village doctor, exercising his craft at Palos de Morguen in Andalusia. Columbus, tired out and ill, had sought refuge in the convent of Santa-Maria de la Rabia. The Abbe in charge of the convent, thinking his guest was insane" (on account of his strange talk of new continents and expeditions), "summoned Dr. Garcia Fernandez to attend the sick man.

"This wise physician, in discoursing with the illustrious explorer on geography and astronomy, quickly found that he did not have to do with an insane person, but with a man of great genius. He told his opinion to the Abbé, and the knowledge of this humble but learned physician probably saved Columbus from a miserable fate.

"Garcia Fernandez started with Vincent Yaneth for the discovery of the Orinoco, and was the first to sound its waters, from whose shores there was furnished later so much of therapeutic value.

"It must be remembered that it was a Florentine

physician, Toscanelli, who fortified Columbus in his conviction of the existence of a great unknown continent. Without Toscanelli's advice, Columbus would have steered in a direction which, instead of leading him to America, would have led his vessels away from it.

"Two physicians accompanied Columbus in his first voyage, both unhesitatingly abandoning country, family and ease, to take part in the expedition organized by the great navigator. One of these physicians was 'Maitre Alonzo,' on board the Santa Maria, and the other 'Maitre Jean,' on board the Pinta. Alonzo returned to Spain with the admiral, and they were overtaken by a frightful storm. The physician accompanied Columbus to Seville and Barcelona, but it is not now possible to say whether the return was by sea or land. Maitre Jean finished his days in a tragic manner, being horribly massacred by the Indians, the first martyr of our profession in the new world.

"The chief physician of the second expedition, comprising 1,500 men, is better known to us. Dr. Diego Alvarez Chanca, of Seville, was physician in ordinary to King Ferdinand and Queen Isabella. His determination to accompany Columbus on his voyage was met with approbation by their Majesties, who addressed the following letter to him:

"The King and the Queen to Dr. Chanca.

"We have known that in your intention of serving Us, you wish to go to the Indies, and in doing this you will serve Us. You will be of help to those who go there by our orders, for our service: do this and go with out Admiral to the aforesaid Indies, he will talk to you of what will concern your sojourn there. . . We send you a letter, so that you will be in receipt of the salary and emoluments that you usually receive from Us."

"Speaking of this physician in a letter to King Ferdinand, Columbus says, 'I have to inform Your Royal Highness of the constant labors of Dr. Chanca, on account of the great numbers of the sick he attended, and his occupation about our stores. He has given proof of the greatest zeal in all that concerns his art. Your Royal Highness, having left me at liberty to fix the sum of the honorariums which I am to give him, . . . I have established for him an annual credit of fifty thousand maravedi.' We are told that Dr. Chanca saved the life of Columbus, when he was attacked by a long continued fever, and that this physician wrote the first accounts of the new world, in the form of a report, addressed to the Municipal Council of Seville. He was the author of a number of books."

The article concludes, "That it is not probable that Dr. Chanca was the only physician who accompanied Columbus on his second voyage. It is likely that another surgeon made the voyage with the admiral, although history is mute concerning his name. His presence in this second expedition is incontestable, if we believe the manuscripts that we are entitled to believe. It is indeed probable that there were a number of



physicians and surgeons, who passed over to America with an expedition numbering so many men."

More definite facts concerning the above question will probably never be known, but it must be of unfailing interest to physicians of the present, the world over, to realize what an important part those of their profession played in the discovery of the New World.—*William P. Coues, M. D., Boston M. & S. S.*

#### IODINE, FAVORITE ANTISEPTIC, NOW HAS RIVAL IN POTASSIUM PERMANGANATE

Iodine, for many years a favorite first aid antiseptic for bruises and cuts, is now having its preeminence challenged by potassium permanganate, a compound long known to scientists but hitherto little used by people in general. Its advocates point out certain advantages it has over iodine, which they claim will eventually cause it to replace the older drug.

In the first place, its advocates state, it is not poisonous as iodine is, and therefore not so dangerous to inquisitive children. Furthermore, it does not smart and burn when applied, and an overdose will not cause harm to the flesh. It is also pointed out that in the dry state potassium permanganate keeps indefinitely, whereas iodine deteriorates in time.

For ordinary treatment, half a teaspoonful of potassium permanganate crystals in a cup of water is sufficient, but for ivy poisoning a teaspoonful to a cup is recommended. For very severe poisoning, such as snake-bite, the dry crystals are pressed directly into the wound, or into small knife incisions about it.

#### WRONG SYSTEM OF EDUCATION

##### HIGH SCHOOL STUDENT NEEDS SCIENCE, NOT SCIENCES

Philadelphia, Oct. 23.—The old system of giving high school boys and girls courses in chemistry, physics and biology merely in order that they may meet college entrance requirements is all wrong, in the opinion of Miss Louise Nichols, specialist in science teaching, of this city.

"A comparatively small percentage of high school graduates now go to higher institutions," says Miss Nichols, in a survey of the situation in *Progressive Education*, "The average student needs to have learned during his school years how science can assist him to better and fuller living rather than how it can assist him to pass a college entrance examination."

#### A MODERN LULLABY

Rock-a-bye baby, upon the bough,  
You get your milk from a certified cow!  
Before your eugenic young parents were wed  
They had decided how you should be fed.  
Hush-a-bye, baby, on the tree-top,  
If grandmother trots you, you tell her to stop.  
Shun the trot-horse that your grandmother rides—  
It will work harm to your little insides.  
Mama's scientific—she knows all the laws—  
She kisses her darling through carbolized gauze.  
Rock-a-bye baby; don't wiggle and squirm:  
Nothing is near you that looks like a germ.

—*The Kalends, Waverly Press, Baltimore.*

## Society Proceedings

### ADAMS COUNTY

April 11, 1927. The regular meeting of the Adams County Medical Society was preceded by a dinner at 6:00 p. m. at the Elks' Club in honor of Dr. Mather Pfeifferberger at Alton, President of the Illinois State Medical Society. At this dinner there were 22 physicians present.

The regular meeting of the society was called to order at 8:15 p. m. with the president in the chair. Thirty-six members and guests were present.

Dr. L. H. A. Nickerson gave a short talk on his experience in the treatment of typhoid fever with the use of chlorate of potash. Dr. Pfeifferberger read a very interesting paper on "Gall Bladder Disease," emphasizing the new diagnostic method of cholecystography. The discussion of the paper was lead by Dr. J. E. Miller and followed by Drs. Nickerson, Williams and Swanberg and finally closed by Dr. Pfeifferberger. Dr. Nickerson made a motion that a vote of thanks be extended Dr. Pfeifferberger for coming to Quincy. This motion was amended by Dr. Wells to include honorary membership in the society. The motion was carried unanimously.

The minutes of the last meeting were ordered approved as published in the *Bulletin*. The secretary read the proposed addition to the by-laws as was printed in the *Bulletin* and which was distributed to the membership some two weeks ago. This motion was promptly seconded. Dr. Koch made a motion that the matter be laid on the table. This motion was lost. The individual sections of the proposed addition to the by-laws were then read and adopted individually after some alterations had been made and finally adopted as a whole. At the final vote there was not a dissenting vote recorded. The approved additions to the by-laws as finally approved read as follows:

There shall be a permanent Executive Council. This Council is to consist of seven (7) members, two (2) of which shall be the then president and secretary of the society.

The other five (5) members of the Council shall be elected to membership as follows: Three (3) elected by the society membership till the next annual election, two (2) elected for the remainder of this year and for one more year. At the annual elections the places of the retiring councillors shall be filled, by election by the Society membership, for a period of two (2) years.

### SECTION I

#### Duties. Quorum.

#### The Duties of the Council.

The Council shall be the legislative and executive body of the society and shall conduct all business not otherwise provided for by the constitution and by-laws. No bill current or incidental expenses shall be paid until it has been approved by the Council except for such recurring charges as the Council may designate. The Council shall not appropriate nor expend funds for other than current, incidental and regularly recurring expenses, without the approval of the Society.

Four (4) councillors shall constitute a quorum for the transaction of business.

## SECTION II.

### Regular Meetings of Council.

The Council shall hold a regular meeting each month. One notice of the time and place of meeting shall be sent to each Councillor by the secretary.

## SECTION III.

### Special Meetings of Council.

Special meetings of the Council may be called by the President at any time and shall be called by him upon the request of two councillors. Notice shall be sent to the councillors in advance of any special meeting and shall contain information as to the nature of the business to be considered at the meeting. No other business shall be transacted.

## SECTION IV.

### Meetings of the Council Open.

Members of the Society may attend the meetings of Council but they shall not be permitted to take part in the proceedings unless by consent of the Council.

## SECTION V.

### Attendance of Councillors.

A Councillor absent from three consecutive regular meetings, unless absence is satisfactorily explained, shall forfeit his membership in the Council. This provision shall not apply to the president nor the secretary of the Society.

## SECTION VI.

### President and Secretary of the Council.

The president and secretary of the Society shall hold like offices in the Council.

## SECTION VII.

### Chairman of Committees.

The Chairman of each standing and special committee shall present to the Council at its regular meetings a report of its committee meetings.

## SECTION VIII.

### The Society and the Council.

It shall be the duty of the secretary at the regular monthly meetings of the Society to make a report of the transactions of the Council, reading the minutes of the preceding meeting. The Council shall refer to the Society in general session for action such matters as they deem sufficiently important as to call for Society action.

## SECTION IX.

### Vacancies in the Council.

Any vacancy in the Council shall be filled by election by the membership of the Adams County Medical Society.

Dr. Cohen made a motion that the committee that had drawn up the by-laws be discharged. Seconded and carried. The secretary made a motion that the election for members on the Council be held at this time and in order than the election be held in true democratic manner, moved that at least ten (10) members be nominated for the Council, the two members who received the highest number of votes to hold office for this year and next. Seconded and carried. Ballots were distributed, tellers appointed and the final results of the election showed that Drs. Cohen and

McReynolds received the highest number of votes followed by Drs. Center, Wells and Knox, making these physicians as members of the Council. Dr. Montgomery asked what disposition should be made of a number of old books that he had in his possession and that belonged to the society. It was moved, seconded and carried that Dr. Montgomery be given power to dispose of the books in any way he saw fit. The president announced that he had been in receipt of a communication from the State Department of Public Health in regard to appointing speakers for the schools during Health Week. It was moved, seconded and carried that the matter be referred to the Public Health Committee with power.

The meeting adjourned at about 10:50 p. m.

HAROLD SWANBERG, M. D.,  
Secretary.

## COOK COUNTY

### CHICAGO MEDICAL SOCIETY REGULAR

MEETING, APRIL 6, 1927

1. Preventive Medicine in Nervous and Mental Disease, Philip J. Trentzsch, Director of Mental Hygiene, Culver Military Academy, Culver, Ind.

Discussion—Chas. F. Read.

2. Fundamentals in the Feeding of Underweight Children, Louis W. Sauer.

Discussion—Isaac Abt.

*Joint Meeting Chicago Medical Society, Chicago Institute of Medicine and Chicago Tuberculosis Society, April 13, 1927.*

The Spread of Tuberculosis Throughout the Body. (Lantern slides.) Dr. Allen K. Krause, Baltimore, Md.

Discussion—Esmond R. Long, James Britton, Prof. W. F. Peterson, University of Illinois, and Prof. Joseph Jaffe, University of Illinois.

*Joint Meeting Chicago Medical Society and Loyola University School of Medicine, April 20, 1927.*

"Some Studies on the Action of Parathormone."

1. Chemical and Physiological. By Dr. William C. Austin, Professor and Head of the Department of Chemistry, Loyola University School of Medicine, Chicago, Ill.

2. Pathological. By Dr. Wm. K. Hueper, Assistant Professor of Pathology, Loyola University School of Medicine, Director of Laboratories, Mercy Hospital, Chicago, Ill.

Discussion opened by Dr. S. A. Matthews, Professor and Head of the Department of Physiology, Loyola University School of Medicine and Dr. Edward Allen.

*Joint Meeting Chicago Medical Society and the Chicago Council of Medical Women, April 27, 1927.*

1. Focal Infections in Diseases of the Urinary Tract. Dr. Catherine Macfarlane, Dr. Faith S. Fetterman, Gynecological Department, Women's Medical College of Pennsylvania.

Discussion—Doctors Alice Conklin, Margaret Jones and Lena K. Sadler.

2. Congenital Stenosis of the Esophagus. Dr. Johanna Heumann.

Discussion—Doctors A. F. Sippy, Jos. Brenneman.



### De KALB COUNTY

April 21, 1927, the De Kalb County Medical Society, with thirty-one present, met for dinner at the Sycamore City Hospital, Sycamore, Ill.

Dr. E. C. Burton thanked the Society for the honor bestowed on him in making his president.

Dr. Wm. Evan Baker of Genoa, Ill., was unanimously elected a member of the Society.

Dr. Jerome Head of Chicago gave a splendid lecture on "Lipiodol." It is an iodized oil of which 20-30 cc. are injected into the trachea for showing by x-ray the bronchial tree, dilated bronchi and other chest cavities. Its greatest use comes in the mapping out of a unilateral bronchiectasis, which when situated in the lower part of the lung can be cured by cutting the phrenic nerve on that side. Dr. Head illustrated his lecture with lantern slides.

Dr. Carl A. Hedblom of Chicago gave a fine discussion of acute abdominal lesions with especial reference to the differential diagnosis. His lecture was also illustrated by lantern slides.

The meeting adjourned with Dr. Burton calling for a rising vote of thanks to Miss Uebler, the Sycamore Hospital, Dr. Head and Dr. Hedblom.

CLIFFORD E. SMITH,  
Secretary.

### Marriages

ROBERT L. HOLCOMBE, Pocahtontas, Ill., to Miss Lucille Badger of St. Louis, February 22.

JOHN ROY POLLOCK to Miss Hazel Hecteman, both of Quincy, Ill., February 12.

CHARLES EDWARD WILEY to Miss Leone Lucille Lovejoy, both of Maywood, Ill., March 26.

### Personals

Dr. Clinton L. Montgomery, Blue Mound, has been appointed to the staff of the state hospital at Alton.

Dr. Arthur J. Atkinson, Chicago, addressed the Elgin Physicians' Club, April 11, on "Gastric Ulcer."

Dr. Alexander A. Maximow of the University of Chicago addressed the Mayo Foundation, Rochester, Minn., March 8, on "Applications of the Method of Tissue Culture to the Solution of Pathologic Problems."

Ivan C. Hall, Ph. D., head, department of bacteriology and public health, University of Colorado, will give the course in general bacteriology at the University of Chicago during the summer session of 1927.

Dr. William O. Krohn, Chicago, will address the May meeting of the St. Clair County Medical Society, East St. Louis, on "Psychiatry in Relation to Crime and Disease"; this will be a joint meeting with the attorneys and dentists.

Dr. Eugene F. Boles addressed the Chicago Council of Medical Women, Hotel Sherman, April 1, on "Use of Endocrine Extract in General Practice."

Dr. William A. Evans addressed the Medico-Historical Club of the University of Illinois College of Medicine, April 13, on "The History of Typhoid Fever in Illinois."

Dr. Charles F. Read addressed the Chicago Society of Industrial Medicine and Surgery, April 4, on "So-Called Traumatic Neuroses," and Dr. Edward S. Blaine on "Traumatic Lesions Not Easily Demonstrated by the Roentgen Ray."

Prof. Edwin O. Jordan, head of the department of hygiene and bacteriology, University of Chicago, delivered the Gordon Bell Memorial Lecture before the Winnipeg Medical Society, Winnipeg, Manitoba, April 22, on "Food Poisoning."

The Chicago Surgical Society met at the Augustana Hospital, April 1, for a clinical meeting and at the University Club in the evening. Among others, Dr. John H. Harger spoke on "Subtotal Resection of the Tibia, Replaced by the Fibula."

Dr. Gladys R. H. Dick, Chicago, addressed the Whiteside County Medical Society, Sterling, April 7, on "Scarlet Fever"; Dr. Dick is said to have gone to Fulton, where there was an epidemic of scarlet fever, to assist in and supervise the application of the "Dick test" to school children.

At the meeting of the Chicago Roentgen Society, Virginia Hotel, April 14, Drs. Harry M. Jones and Benjamin H. Orndoff spoke on "The Possibility of Hypothyroidism, Following Roentgen-Ray Therapy of Toxic Thyroids" and "Carcinoma of the Breast, and the Prevention of Recurrence," respectively.

Dr. Henry C. Sweaney addressed the Chicago Pathological Society, April 11, on "Variations of the Tubercle Parasite"; Dr. Emanuel B. Fink on "Malignant Tumors of the Pituitary Gland," and Dr. Harry Jackson, on "The Pathogenesis of Agranulocytosis."

Dr. Robert B. Osgood, Boston, addressed a joint meeting of the Chicago Orthopedic Club and the committee on after-care and study of infantile paralysis of the Visiting Nurse Association, April 8, on "Progress in Treatment of Crippled Children."

Dr. Ralph H. Kuhns of the Children's Memorial Hospital, Chicago, spoke at a recent meeting of the Illinois Children's Home and Aid Society, March 28, on the subject of "Facts and Fallacies in Infant Feeding."

Dr. Clarence L. Wheaton addressed the Rock Island County Medical Society at their annual banquet at Moline, Ill., April 12, on "Lobar Pneumonia."

Dr. C. H. Diehl, who for the past eight years has been connected with the Illinois State Department of Public Health, was appointed managing officer of the State School and Colony of Feeble-minded Children at Lincoln, Illinois, effective April 1.

Dr. Mildred Van Cleve of Macomb sailed April 23 for London, where she will take post-graduate work in pediatrics at the Hospital for Sick Children, and a special course in diseases of infants offered by the London Post-Graduate Medical Association.

Dr. Walter C. Martini has tendered his resignation as Medical Director of the Champaign County Tuberculosis Sanatorium, at Urbana, Illinois, to become effective on July 1. At that time Dr. Martini will become associated with Dr. Geo. Thos. Palmer and Dr. Herman H. Cole in the operation of the Palmer Tuberculosis Sanatorium at Springfield.

Dr. Martini served overseas during the World War and was later connected with the Chicago Municipal Sanitarium and the U. S. Veterans' Bureau. He served as Medical Director of the Morgan County Tuberculosis Sanatorium before going to the Champaign County Tuberculosis Sanatorium.

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### News Notes

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—The council of the Chicago Medical Society voted, April 12, to discontinue the telephone bureau in view of the cost of operation and the small number of members who avail themselves of this service.

—In the will of the late Charles Deering, Miami, Fla., there was a bequest of \$340,000 to Wesley Memorial Hospital to complete a gift of \$500,000, and a bequest of \$500,000 to Northwestern University to be added to the Deering Memorial Fund.

—At the four hundred and twenty-sixth regu-

lar meeting of the Chicago Gynecological Society, April 15, Dr. William C. Danforth will read a paper on "Immediate Repair of Cervical Tears After Labor," and Dr. Carey Culbertson and J. L. O'Leary on "The Form Changes of the Human Uterine Gland."

—Chiropractors A. A. Hawkinson, Warsaw, and H. E. Puckett, LaHarpe, have been notified by the state's attorney that they must at once proceed to complete their sentence at the state farm at Vandalia for practicing without licenses. Sentenced last summer, they appealed to the supreme court which upheld the verdict.

—The trustees of the University of Chicago have merged the laboratory and tuition fees with the general tuition fee, establishing a net fee of \$100 a quarter for undergraduates, to take effect with the summer quarter of 1927. Students will receive health, dispensary and infirmary service in the new hospital, the cost of which is included in the foregoing figure.

—The Swift bill to authorize the employment of school nurses was killed, March 30, by the house, following a number of speeches unfavorable to paternalistic legislation. The senate approved the bill. According to the *Chicago Tribune*, many school nurses may be thrown out of employment, or else continued in office by unofficial consent only, as a result of the action of the house.

—At a joint meeting of the Institute of Medicine and the Chicago Gynecological Society, April 11, at the City Club, Dr. Herbert M. Evans, University of California Medical School, addressed the societies on "The Relation Between Nutrition and Fertility"; Edward A. Doisy, Ph.D., St. Louis University School of Medicine, on "Extraction of an Ovarian Hormone and Some of Its Chemical and Pharmacologic Properties," and Edgar Allen, Ph.D., University of Missouri School of Medicine, on "Animal Reactions of Ovarian and Placental Hormones."

—At the April 25 meeting of the Chicago Society of Internal Medicine, City Club, Dr. Joseph A. Capps read a paper on "Pericardial Pain—An Experimental and Clinical Study"; George Wakerlin, "Studies on Motility of the Gallbladder"; Drs. Karl K. Koessler and Siegfried Maurer, "Experimental and Clinical Studies on Pernicious Anemia," and Bertha Kaplan



and Charles S. Williamson. "Amebic Dysentery in Chicago with Results of Examination of About 500 Food Handlers."

—The District Medical Society of Central Illinois held its 51st annual meeting in Huber Memorial Hospital, Pana, April 26. In the morning clinics were held. Dr. Carl E. Black demonstrated gas-oxygen anesthesia. Dr. John T. Nerancy gave a neurological clinic. Dr. W. H. Newcomb on advanced pulmonary tuberculosis. After luncheon the following papers were read and discussed:

1. Advanced Pulmonary Tuberculosis, by W. H. Newcomb, M. D., of the Morgan County Tuberculosis Sanatorium.
2. Paresis, by John T. Nerancy, M. D., Physician Jacksonville State Hospital.
3. Making Better Surgical Risks, by Carl Ellsworth Black, Jr., M. D.
4. Intestinal Anastomosis with Report of Cases, by Carl E. Black, M. D.

Officers for the ensuing year were elected as follows: Carl E. Black, Sr., Jacksonville, president; W. H. Mercer, Taylorville, vice-president; F. A. Martin, Pana, secretary and treasurer, re-elected; censors: I. G. Hubbard, Olhman; C. H. Hulick, Shelbyville, and J. J. Patterson, Oconee.

This was a very interesting meeting and attended by about fifty doctors from Central Illinois.

## Deaths

NIEL ANDERSON, Chicago; Chicago Homeopathic Medical College, 1896; a Fellow, A. M. A.; Rush Medical College, Chicago, 1899; aged 59; died, March 24, following an operation for brain tumor.

CARL LEWIS BARNES, Chicago; Medical College of Indiana, Indianapolis, 1892; a Fellow, A. M. A.; formerly professor of public health, Hahnemann Medical College and Hospital, Chicago; professor of anatomy and surgery, College of Physicians and Surgeons, Indianapolis, 1893-1895; served during the World War; on the staffs of the Chicago General Jackson Park and Rogers Park hospitals; aged 54; died, April 5, of cerebral hemorrhage and pneumonia.

JOHN FORREST BELL, Elgin, Ill.; Jefferson Medical College of Philadelphia, 1890; a Fellow, A. M. A.; aged 63; died, March 16, of heart disease.

ARTHUR BUDAN, Chicago; Harvey Medical College, Chicago, 1902; member of the Illinois State Medical Society; attending physician and formerly director of the daily clinic for private patients, Norwegian-American Hospital; member of the board of directors, Physicians' Fellowship Club; aged 57; died suddenly, March 25, of coronary thrombosis.

MOSES EISENSTAEDT, Chicago, Northwestern University Medical School, Chicago, 1902; a Fellow, A. M. A.; also a dentist; aged 47; died, February 26, of septicemia.

PERRY M. EVANS, Hoopeston, Ill.; Rush Medical College, Chicago, 1870; Civil War veteran; aged 84; died, March 7.

CHARLES EDWIN FERREE, Wayne City, Ill.; Physio-Medical College of Indiana, Indianapolis, 1905; formerly professor of anatomy at his alma mater; aged 66; died, March 17, of acute nephritis.

DAVID FISKE, Chicago; Rush Medical College, Chicago, 1900; a Fellow, A. M. A.; assistant clinical professor of laryngology and otology at his alma mater; aged 54; died, March 31, at Evanston, of heart disease.

ALLEN WILLIAM GRAY, Chicago; Chicago Medical College, 1868; member of the Illinois State Medical Society; Civil War veteran; aged 87; died March 23, of carcinoma of the prostate, uremia and diabetes.

WILLIAM JONES, Aurora, Ill.; Chicago College of Physicians and Surgeons, 1895; aged 59; died, March 14, of broncho-pneumonia.

ADOLPH H. LEVITON, Chicago; College of Physicians and Surgeons, Chicago, 1894; a Fellow, A. M. A.; aged 68; died, March 29, at St. Anthony's Hospital, of angina pectoris.

ADELBERT D. MCINTYRE, Bradford, Ill.; Kentucky School of Medicine, Louisville, 1891; member of the Illinois State Medical Society; aged 71; died, March 13, of broniectasis and myocarditis.

WILLIAM HENRY MINER, Danville, Ill.; University of Illinois College of Medicine, Chicago, 1914; a Fellow, A. M. A.; formerly on the staff of the Wabash Hospital, Decatur; aged 34; died, March 20, of septicemia, following streptococcic sore throat.

ADELMA GEORGE PATTON, Monmouth, Ill.; Miami Medical College, Cincinnati, 1892; a Fellow, A. M. A.; past president of the Warren County Medical Society; member of the Radiological Society of North America; aged 57; died, March 29, of pneumonia.

MICHAEL STEIN, Chicago; Northwestern University Medical School, Chicago, 1922; a Fellow, A. M. A.; aged 33; died, February 10, of heart disease.

CAMILLO VOLINI, Chicago; University of Naples, Italy, 1885; aged 64; a Fellow, A. M. A.; died, March 20, of cerebral hemorrhage and diabetes mellitus.

HERMAN C. WEISKOPF, Chicago; Northwestern University Medical School, Chicago, 1900; a Fellow, A. M. A.; aged 59; died, March 12, of carcinoma.

WILLIAM LOUIS WILSON, Hinsdale, Ill.; Northwestern University Medical School, Chicago, 1896; a Fellow, A. M. A.; at one time instructor of dermatology, Rush Medical College, Chicago; past president of the Du Page County Medical Society; formerly on the staff of the Lakeside Hospital, Chicago; aged 57; died, March 17, at St. Luke's Hospital, Chicago, of acute pancreatitis.

ALBERT JOHN WOODCOCK, Byron, Ill.; Rush Medical College, Chicago, 1880; aged 70; died, February 19, of a self-inflicted bullet wound.

JEAN TURNER ZIMMERMANN, Chicago; College of Physicians and Surgeons, Keokuk, 1897; aged 55; died, January 20, at Toledo, Ohio, of cerebral hemorrhage.

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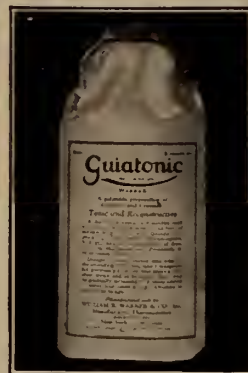
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after three months from date of publication, 50 cents.

## Editorial

### NOT A DOCTOR'S NAME ON THE COMMITTEE

Mayor Thompson of Chicago has appointed a  
"business committee" of three hundred citizens  
who are highly competent men of affairs, with  
an executive committee of nine for the co-opera-  
tion of public administration and private enter-  
prise. This is a commendable, even a sagacious  
move on the part of the mayor and should create  
the projection of administrative programs of  
great value and of unprecedented effect upon  
public welfare. The mayor chose from every  
influential walk of life except one—the medical  
profession. There is not a doctor on the com-  
mittee.

We have recently been engaged in the com-  
pilation of Medical Practice in Illinois. We  
have traced with much interest and great pride  
the major part physicians have played in the  
development of the Illinois country from its dis-  
covery by Father Marquette in 1763 to the  
present time. We found that in every public enter-  
prise throughout the development of the coun-  
try the doctors have been, if not the prime  
mover, at least a booster for every enterprise that  
has been inaugurated.

We are inclined to think that the gentlemen  
who act in an advisory capacity to the mayor  
in the selection of his committee must look upon  
the medical profession as a crew of ignoramuses  
and are unfamiliar with the fact that the medi-  
cal profession have of necessity a finger in al-  
most every human crisis. Is it possible that  
they do not care for some of the really expert  
opinions upon general welfare matters that come  
from medical men and women?

Here is an instance proving the necessity of  
organization of the medical profession. Medical  
and allied interests working in unison to bring  
about the respect that is due them.



## HISTORY OF MEDICAL PRACTICE IN ILLINOIS JUST OFF THE PRESS

Doctors of Illinois, or who are descendants of pioneer physicians of the "Illinois country" will hear with interest that volume one of the History of Medical Practice in the State of Illinois is ready for delivery.

The history has been written under the supervision of a committee appointed by the Illinois State Medical Society as a commemoration of its seventy-fifth anniversary but more especially to make a living tribute to those valient men of the medical profession who played so able a part in the exploration, settlement and development of the Illinois country.

In this first volume of the history are set down events from the earliest available knowledge of conditions in the Illinois country, along through the days of the aborigines and commencing with the actual records when in 1673 Father Marquette had medical attention in Chicago, up until the year 1850.

In the second volume, now in preparation, narration continues up until the present time. Future years will bring other volumes so that this history will be an ever virile monument to the men and incidents whom it would honor.

Research of years resulted in an opulent supply of material from which to compile this history, and has evidenced to an almost unbelievable degree the vital part played by physicians in every angle of the exploration, settlement and development of a country that is one of the richest and most influential sections of the richest country in the world.

It must be remembered that originally the Illinois country encompassed a territory far greater than the area now known as the State of Illinois. Wisconsin, Indiana, Missouri, Kentucky and Iowa as well as what is now Illinois and even some sections of Ohio fell into that primitive epitome of the Illinois country. In the southern part of the state it was well into the nineteenth century before Missouri and Illinois ever acknowledged the natural divorce of interests made by the Mississippi river. Because of this, naturally enough, close interest in this history extends to physicians or to their descendants in practically every state in the Mississippi Valley or contiguous thereto.

Rare maps, unusual personal memorabilia,

and rare discretion in compilation make this history of unique interest to doctors everywhere and to many laymen.

This history of medical practice in the state of Illinois embodies in the course of its narration, an interesting and illustrated digest of the early efforts of white settlers in Illinois, with specific allusion to the share in these tasks, performed by medical men. Included are portraits of rare interest; reproductions of historic documents, excerpts from diaries, personal letters, human reminiscences of days fraught with peril, filled with hope, and not devoid of humor, through a period of about 250 years. From the days of the "Chirurgeon" who attended Pere Marquette, through the massacres at Fort Dearborn, the years of Indian raids, down with the circuit riding "saddle-bag" doctors, to these days of radium and radio, this history marches. Attics, family albums, safe deposit vaults, and state records have been ransacked to produce the material needed for this chronicle. Illinois holds today the honor of being the world's medical center. Progressive steps of this achievement, and its contributive factors, such as hospitals, asylums, sanitariums, and allied institutions and medical colleges are set forth in detail, both pictorial, documentary and narrative. In brief, this account epitomizes the almost unequalled growth of a community whose economic wealth is paralleled by its public health. Personal data of the men, of the organizations,—including pioneer army and navy physicians and surgeons, and local, county and district societies, schools and hospitals, as well as of the Illinois State Medical Society, itself; various internationally famous medical discoveries made by Illinois men; the state's contribution to the world of research; medical libraries and periodicals existent in Illinois; campaigns for medical protection against enemies of public health; details of the various Medical Practice Acts; state sanitation from the notable drainage canal and the supervision of food supplies, vital statistics; meetings, officers, policies and finances of the State Society; all this and more in accurate transcription make this volume a miniature encyclopedia of scientific advance and desirable and hitherto unavailable information. Be sure of YOUR copy by subscribing now. Just what you want to know about the doctors who have upheld the practice of medicine in "The Illinois Country" is condensed, and

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## DR. WILLIAM ALLEN PUSEY COMMENDS MEDICAL HISTORY OF ILLINOIS

Dr. William Allen Pusey, ex-president of the American Medical Association, lauds very highly the Medical History of Illinois just off the press.

The following is his letter:

Chicago, June 2, 1927.

Dear Doctor Zeuch:

I have been looking over the first volume of the "Medical History of Illinois" and I feel that you should be congratulated upon it. You have gotten together an immense amount of valuable and interesting information. It is invaluable. I realize from little things that I have done myself what an amount of time and labor you have given to it, but I also know how interesting it is.

Yours cordially,

WM. ALLEN PUSEY, M. D.

## LAY PRESS JUDICIOUS IN COMMENT ON CONGRESSIONAL DICTATION OF MEDICAL PRACTICE

A recent editorial in the *Chicago Tribune* presents so clearly the case against dictation of medical practice by congress and legislative bodies that the editor of this journal feels it incumbent to reprint this comment made so wisely in the lay press. Entitled "Volstead as the Doctor," the article reads:

Dr. Wendell C. Phillips, retiring president of the American Medical Association, in his address to the house of delegates of the association, asked that a protest be made against the whisky prescription control provision of the Volstead act, which, he said, was insulting and "legislative imperialism." The protest has been duly made.

When congress stipulated that whisky legally could be prescribed in the practice of medicine it adopted the medical opinion that whisky has a value in such practice. There are doctors who say it has none, or none for which a nonalcoholic substitute cannot be used. The Volstead act recognized the other opinion, and consequently recognized whisky as a medicine. With this established, congress refused to grant the doctor's discretion in using the medicine. It accepted a theory that the extreme valid use of whisky would be a pint every ten days for any patient.

Law does not restrict the dosage of other medi-



cine available for the practitioner and patient. It comes within the physician's judgment and discretion. This is peculiar law. Volstead and the doctor are supposed to go arm in arm to the patient, and if the doctor prescribes whisky the Volstead act prescribes how much.

This transparently follows the legal assumption that doctors would make an illegal use of the prescription and release large quantities of liquor for beverage purposes. The medical code of honor is a high one and it governs in most particulars the majority of practicing physicians, but there are prescriptions which satisfy an appetite for stimulants rather than provide medical requirements. The majority of doctors, scrupulous in their practice of medicine, find that their whole profession rests under the legal implication that they must have a dosage given by law, and they resent it, but it is a congenital part of a law which in essence is a denial of judgment and discretion. The Volstead act assumes that the American people cannot be trusted with their own morals, health, deportment, and conduct, being in this respect unique among the supposedly civilized people of the world. It is a part of that to assume that American doctors generally cannot be trusted to prescribe medicine if there is any chance of medicine being used as a beverage.

The Volstead act denies that maturity, sanity, decency, and self-respect will guide the American people unless there is an enforcement agent to make these qualities effective by compulsion.

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#### A. M. A. BY UNANIMOUS VOTE RECOMMENDS MODIFICATION OF THE VOLSTEAD ACT

Without a dissenting vote the American Medical Association at its annual meeting in Washington, D. C., May 16-20, passed the resolution approved by its reference committee on Board of Trustees and Secretary as follows:

WHEREAS, The Congress of the United States under authority of the Eighteenth Amendment to the Constitution of the United States passed an act known as the National Prohibition Act and an act supplemental thereto; and

WHEREAS, The National Prohibition Act provided that no physician should prescribe more than one pint of spirituous liquor to be used by a patient within any period of ten days, and the

act supplemental to said act provided that not more than one quart of vinous liquor should be prescribed within any like period, and no combination of spirituous and vinous liquor containing more than one-half pint of alcohol should be so prescribed; and

WHEREAS, The Supreme Court of the United States has decided by a majority of five to four, in the case of Lambert vs. Yellowley, et al., that the Congress has power so to limit the amount of liquor that may be prescribed, irrespective of the patient's condition or the physician's opinion as to the patient's needs; and

WHEREAS, By this decision of the Supreme Court, Congress becomes both pharmacologist and physician with power to decide what is and what is not a medicine and so fix the dosage of remedies contained in the U. S. Pharmacopoeia, and

WHEREAS, The assumption by Congress of these powers of life and death over the sick is hazardous and dangerous to Public Health, and

WHEREAS, The question of the amount of spirituous and vinous liquor a physician may use in the treatment of disease, is in no sense a political question and has no bearing on the so-called wet or dry issue.

*Therefore Be It Resolved*, That the Illinois State Medical Society condemns as dangerous to the health of the public the usurpation by Congress or by any other legislative body the fixing of the dosage of any drug, and that the limitation to one pint in ten days of spirituous liquor when prescribed by a physician to his patient in the treatment of disease may in some cases if adhered to by the physician be the cause of the patient not recovering from his illness, and

*Be It Further Resolved*, That the Illinois State Medical Society requests Congress in the interest of the Scientific treatment of disease and preservation of the Public Health that the section of the National Prohibition Act and the act supplemental thereto that limits the amount of spirituous liquor and vinous liquor that may be prescribed shall be repealed forthwith and that such laws or regulations be made as will prevent the diversion of spirituous or vinous liquors that may be prescribed by a physician in the treatment of disease to beverage purposes provided there be not thereby curtailed the right of the physician to prescribe and administer in good faith such liquors in such amounts and dosage as in his

scientific judgment the need of his patient may require.

### ALCOHOL DEATHS INCREASE RAPIDLY IN AMERICA

DEATH FROM ALCOHOL HAS BECOME A PUBLIC  
HEALTH PROBLEM—COMMISSIONER OF  
HEALTH OF NEW YORK SHOWS  
ALARMING INCREASE

Dr. Matthias Nicoll, Jr., commissioner of health for the State of New York, before a conference of state and territorial health officials in Washington, May 21, 1927, presented figures which were based on the returns of the census bureau and other official sources showing that the increase in deaths from alcoholism has been over 300 per cent since prohibition became effective. He made a plea for joint action by Federal and State health authorities to deal with what he declared was a major health problem.

Dr. Nicoll, in his address, pointed out that public health authorities have remained "ominously silent" in the face of the constantly growing list of deaths from "poison liquor" in recent years.

Dr. Nicoll said that official figures from the census bureau showed that the deaths from alcoholism and cirrhosis of the liver in the period 1920-25 inclusive amounted to 57,000. Still more striking was his statement that the rate of increase of such deaths for the entire country in 1925 was 250 per cent of the rate in 1920.

Commissioner of Health Nicoll urges a United States Commission for a national survey of the increasing death rate from alcohol.

At the conference were twenty-nine health officials. It was an open forum conducted by Dr. Hugh S. Cumming, Surgeon General of the United States Public Health Service.

### STATE SUBSIDIES A FAILURE IN ENGLAND

The English Dole system which corresponds to our state subsidy scheme, has proven a failure. The British government deficits for 1926 and the increased levies for 1927 demonstrate the necessity of abolishing insurance against unemployment, commonly called the dole.

A committee headed by Lord Blanesburg has been studying the question for more than a year. The committee urges the restoration of unemployment insurance to its original basis, which

would mean the automatic disappearance of the dole. The state subsidy system is wrong in principle, it is fatal when employed either in health matters or in economic problems as the English have found out to their financial embarrassment.

The Sheppard-Towner Act, which we have consistently opposed from its inception, is a fine example of many similar fifty-fifty schemes proposed in this country. All these schemes are wrong in principle and will prove the downfall of the nation if not curbed before they have gone too far.

We again warn the profession to aid and assist in preventing further extension of this kind of legislation, whether applied to medicine or other lines of endeavor.

### THE BIRTH OF MODERN MEDICINE DATES BACK TO 3400 B. C.

The following from the *Italian Tribune* is highly illuminating and educational:

Imported false teeth obtained by the Egyptians from Rome and Greece were found in the ancient tombs along the Nile.

Major Coupal, who recently addressed the American Academy of Medicine on this subject, partly exonerated modern man from the popular stigma of alone possessing poor teeth through the use of soft and artificial foods. He said examination of 5,000 year old mummies showed the use of false teeth and that the teeth of the slumbering pharaohs were "very poor."

The lecture, entitled "The History of Pathology," was illustrated by lantern slides.

Major Coupal traced the development of modern medicine from as early as 3400 B. C. and declared the history of pathology is linked closely with man's development of mythology, religion, superstition, sanitation and criminal codes. Healing, he said, was in prehistoric times only an expression of self-preservation, similar to that of a dog licking his wounds. The reaction of the dog is the cause and effect process, the instinctive basis of healing.

The close relationship between mythology and medicine in the early days of the earth, Major Coupal said, was illustrated by the custom of using prayer and fright to drive out the demons which possessed the body and which were thought to be the sole pathological cause of disease.

Major Coupal said that disease and crude methods for its treatment were recorded on



votive columns dating to 3400 B. C. He outlined the work of each major civilization in medicine, crediting the Egyptians, Assyrians, Jews, Chinese and Mohammedans with making valuable discoveries which led to the birth of the modern science.

## SUMMER CLINICS UNDER THE AUSPICES OF THE CHICAGO MEDICAL SOCIETY

### THE KNOWLEDGE OF GENERATIONS THE EXPERIENCE OF CENTURIES

The Summer Clinics to be held June 13th to July 8th under the auspices of the Chicago Medical Society will be conducted by representatives of the knowledge of generations and through the generous co-operation of the major hospitals of the metropolitan area of Chicago. Men known to the four corners of the medical world and whose names are synonymous of marvelous skill, tremendous learning and broad experience will be found listed among the clinicians to conduct classes in every phase of medicine and surgery.

The experience of centuries—down through the years medical research and medical standards have been carried to a high peak. Yet we are confident that there will be many exemplifications of medical and surgical practice with which many are unfamiliar and the learning of which will be most beneficial in the conducting of local practice which will reflect the accomplishments of the medical world.

To quote from an address of a renowned medical leader: "The physician can no longer take a passive attitude for if he allows his prerogative to be usurped and shirks his duty, he throws wide open the door for paternalism and state medicine.

Although surrounded by quacks and charlatans and engaged in competition with irregular practitioners, the physician continues to be the court of last resort by the public at large in cases of serious illness. More than ever is he consulted by the intelligent layman for minor ailments and the beginning of more serious maladies which may be checked or alleviated by timely intervention. As the value of medical treatment in the early stages of disease becomes more and more impressed upon the public at large, physicians will find greater fields of usefulness open to them.

*But the public is constantly demanding better training among physicians, and rightly so. Medicine is a science, although unfortunately not an exact one, and rests upon the foundation stones of research and experiment. Unless we are prepared to avail ourselves of the advances in science constantly being brought forward, we cannot hope to maintain medicine on the exalted plane on which it has rested for centuries.*

The clinician of the future should be taught certain facts by a full time scientific worker, but his greatest instructions should come from one who is grounded in facts and from one who is a practicing doctor. Postgraduate work should be well received and should be continued."

Recently the American Medical Association Bulletin published a resumé of a questionnaire dealing with questions relating to medical preparation. It brought to the front the inadequacy of medical training and the consequent necessity of post graduate work. Go to any of the so-called medical centers of the world, Vienna, London or Paris, and no greater opportunities supply the essential requirements of your practice than the post graduate work offered in Chicago.

Our reason in carrying on this post graduate work is solely in the interest of the medical profession. The Clinicians, famous and heavily burdened by their personal practices, are sacrificing much to give their time and efforts and with the one and only remuneration, to keep the standards of medicine on an exalted plane and the physicians to maintain their paramount standing in the professional world.

### THE FOLLOWING HOSPITALS CO-OPERATING

Alexian Brothers Hospital  
Chicago Laboratory  
Chicago Lying-in Hospital  
Chicago Municipal Sanitarium  
Cook County Hospital  
Evangelical Hospital  
Frances Willard Hospital  
Jackson Park Hospital  
Laboratory of Surgical Technique  
Mercy Hospital  
Michael Reese Hospital  
Mount Sinai Hospital  
Murphy Laboratories  
John B. Murphy Hospital  
National Pathological Laboratory  
Post Graduate Hospital  
Presbyterian Hospital  
Ravenswood Hospital

St. Joseph Hospital  
 St. Luke's Hospital  
 University of Illinois College of Medicine  
 Washington Park Hospital  
 Wesley Memorial Hospital

### REGISTRATION

The Registration Fee will be \$10.00 for the two weeks' Course, payable in advance, and admittance will be by card only, issued by the Chicago Medical Society.

Please fill in registration blank and mail at once, giving First, Second and Third choice of Hospitals, and which Course—June 13th to 24 OR June 27th to July 8th—you desire, together with the Registration Fee of \$10.00.

On receipt of this initial registration blank giving your choice of hospitals, a Schedule of the Hospital Clinics available at that time will be sent to you for final selection of Clinics.

Registrations are already coming in, and since these Clinics are open to the entire Country, it would seem wise to register early.

### REGISTRATION BLANK

Fee Enclosed \$10.00

Name .....  
 (Print)

Address .....

City and State.....

Course (indicate one only).....

June 13 to June 24 or June 27 to July 8  
 Hospital—

First Choice .....

Second Choice .....

Third Choice .....

Special Work .....  
 or

General Work .....

### A MONUMENT TO THE MEDICAL PROFESSION OF COOK COUNTY

#### THE MEDICAL AND DENTAL ARTS CLUB OF CHICAGO

The Medical and Dental Arts Club associated with the new Medical and Dental Arts Building will fulfill every need of the medical and dental professions of Chicago, both social, scientific and commercial.

Two entire floors of the building will be used for club purposes. The club also has a com-

modious auditorium for the accommodation of scientific meetings.

The magnificent views, dignified comforts and quiet spaciousness combine to make one of the most attractive clubs in the city for the members.

The extensive club living rooms and dining rooms are grouped around a central glass roof patio two stories in height affording magnificent views from any part of the club, both of the club interior and looking out upon Lake Michigan, the river and the new Wacker Drive.

The following names of physicians are listed among the members of the club. There are some additional membership still to be sold.

#### MEDICAL MEMBERS OF MEDICAL AND DENTAL ARTS CLUB

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Annie Petersen Saunders, M. D.  
Robert H. Saunders, M. D.  
R. Alvah Sawyer, M. D.  
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Benedict F. Shanahan, M. D.  
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NOTE: Dentists equal to the above list of physicians hold membership in the club.

## POST GRADUATE STUDIES IN BERLIN

International medical postgraduate courses will be held in Berlin by the union of professors and by the organization centered in Kaiserin Friedrich Institute with the assistance of the medical faculty of the university. One section of the courses will be held continuously, another section only during the period September 15 to October 31.

## 1. CONTINUOUS COURSES

a. Individual courses in all branches of medicine with practical exercises usually lasting 4 weeks.

b. "Externships" in clinics and hospitals and laboratories. These are chiefly intended for medical men desirous of working under assisted practical conditions for a longer period (at least 2 to 3 months).

## 2. COURSES FROM SEPTEMBER 15 TO OCTOBER 31

In the Autumn it is intended to hold:

a. General courses in all the branches of Internal Medicine with special regard to modern therapy. (Duration 14 days).

b. General courses in stomach and intestinal diseases.

c. General courses in Paediatrics.

d. General courses in Gynaecology.

e. Special courses for nose, ear and throat specialists.

f. Individual courses in all departments of medicine with practical participation as given in a specially prepared list.

The medium of instruction is German, but there are a number of lecturers who are able to instruct in the English, French or Spanish languages.

The Bureau would be very glad to furnish addresses where suitable accommodation is available, and to give information in regard to cost of living, etc., also to arrange facilities for seeing operations in clinics and similar services.

Every medical man who intends to visit Germany or particularly Berlin for the purpose of continuing his studies is advised to get into touch with the Bureau which has an official character and furnishes information quite objectively.

The address of the Bureau is: Kaiserin Friedrich-Haus, Nos. 2-4 Luisenplatz, Berlin N.W. 6.

## FAMOUS "FIRST" WORDS

Plutarch: "I am sorry that I have no more lives to give to my country."

Samson: "I'm strong for you kid."

Jonah: "You can't keep a good man down."

Cleopatra: "You're as easy as Mark Antony."

David: "The bigger they are the harder they fall."

Helen of Troy: "So this is Paris."

Columbus: "I don't know where I'm going, but I'm on my way."

Nero: "Keep the homefires burning."

Solomon: "I love the ladies."

Noah: "It floats."

Methuselah: "The first hundred years are the hardest."

Queen Elizabeth to Sir Walter Raleigh: "Keep your shirt on."

## Correspondence

INFANT WELFARE SOCIETY PRACTIC-  
ING MEDICINE

Comment by the Editor:

In the April number of the JOURNAL was a letter from Mr. Lucius Teter, president Infant Welfare Society, Chicago, and reply to same by Dr. Emmet Keating.

Below we publish a rejoinder by Mr. Teter and a subrejoinder on the part of Dr. Keating.

INFANT WELFARE SOCIETY OF CHICAGO

April 25, 1927.

*My Dear Doctor Keating:*

Again referring to your letter of March 26, after acknowledging your letter some days ago, I prepared a reply for it, which had just been written when my attention was called to the fact that you had submitted Mr. Wells' letter and the one which you wrote to me at a public meeting, and that these had subsequently been printed in the April edition of the ILLINOIS MEDICAL JOURNAL.

While I have no desire to enter into a debate on the subject of the benefit of Infant Welfare Society to our community, I would count it a favor in the spirit of good sportsmanship if you would see that my letter has the same publicity as that given to yours and Mr. Wells'.

It seems to me that the outstanding considerations in connection with the questions raised by your letter of March 26 divide themselves into two general classes:

First—What has been the effect upon the public through the operation of such an agency as the Infant Welfare Society during the last twenty years? and

Second—What has been the effect on the medical profession during the same period?

One must deal with a subject of this importance in these broader terms rather than in narrow individual terms, because, of course, that is the way human progress is made. It is not nearly so important to the world that an individual doctor or an individual banker should be a great success, but it is of every importance to the world that the whole medical profession should advance and succeed, and it is important



to the world that we have a good and successful banking system.

If we agree generally as to this, let us take up the first point.

As nearly as I can ascertain, twenty years ago there were not to exceed half a dozen physicians in Chicago who made a special study of and were skilled in the care of infants, and these without exception, I believe, practiced among the economically well-to-do part of our population. The general practitioners of that day were kept very busy caring for adults and struggling valiantly with major problems that they and their successors have gone a long way toward correcting. Such contact as these men had with infants, aside from obstetrics, had to do with *sick* babies, and it is a pathetic story of lay-ignorance and professional lack of special training that the parents called the doctors in all too late, and that when the doctors came the babies were treated not as babies, but as little adults. The net result was an infant mortality rate of which I do not think either doctors or parents were particularly proud.

I do not, nor have I heard other people criticize the doctors of that period because of those conditions. It was simply a point in the stage of our evolution from which, I believe, we have made progress. At that same period the average person looked upon the hospital, the doctor, the lawyer, and, to some extent, I am sure, the banker, as an institution and persons to be feared and to be avoided as much as possible. Today through the operation of agencies of our sort and the cooperation of the doctors, the attitude of the public is quite different. The infant mortality rate is very much less, the use of the hospital, the doctor, the trained nurse, has vastly increased, and, as I see it, everybody—the layman and the professional man—has carried the common fund of knowledge to a much higher level. Speaking specifically of Infant Welfare Society, we have had on our Board of Directors from its inception medical men who not only pointed to the need for our work, but to whom we have consistently looked for guidance along professional lines. On the Board at the beginning were Doctors Abt and Churchill, who were in the small minority group of baby doctors of twenty years ago. The later Directors of our organization have followed their guidance and that of their

successors and associates in carrying out our work.

Now as to the other question—that of the effect of this program upon the doctors—this is my judgment: that Infant Welfare Society of Chicago contributes vastly more to the training of the public in the use of doctors than the reverse. While in an organization as large as ours it is possible to make mistakes, it has never been the policy of the Society to advise mothers *not* to use doctors. Quite the reverse. At our conferences to which many hundreds of mothers come through the encouragement of nurses, and the use of interpreters, these mothers learn not only how to care for their babies, but learn that doctors are not to be feared, and it is the uniform practice of our doctors and nurses to recommend physicians' care in cases of illness, and the use of hospitals. Throughout our career we have, with the exception of a very few instances, waged a uniform campaign against the employment of mid-wives.

Two or three years ago, at the suggestion of the Chicago Medical Society, we held several conferences with a committee of that Society, in which we jointly undertook the determination of the "economic" basis for deciding the extent of service we should render. It was then agreed that \$12 per week per member of the family should be regarded as the minimum family income that could at all make it possible to pay doctor bills. Following this determination we established a rule in our stations that after the first call of a mother and child at our stations our nurses would visit the home and undertake, while giving advice as to sanitation, hygiene, etc., to ascertain the economic position of the family. If it is found that they are beyond the limit above indicated, they are advised that they should make use of their own physicians. If, as is the usual case, they have no family physician, they are told to call the Chicago Medical Society.

Let me say in closing that the program of the Infant Welfare Society does not contemplate permanently continuing in any field of activity that is being adequately cared for by other agencies. Already the Health Department of the City of Chicago is carrying on in various parts of the city a work which, if we may say modestly, was started by us. Our medical and nursing staffs are continually alert to new lines of

activity that are needed, and it is the ambition of all of us that we should be the research, torch-bearing organization with reference to the problems of mother and child in the city, and just so rapidly as the members of the medical profession or other organizations take up and carry on this work we will gladly relinquish it. In the meantime there are probably between four and five hundred pediatricians in Chicago at the present time, a large percentage of whom have had special training through our stations.

To the query as to whether the public and the medical profession of Chicago are both on a higher plane of understanding and mutual helpfulness now than at the time Infant Welfare Society was formed, my reply is "yes." I hope on investigation and reflection yours will be the same.

Sincerely,

Lucius Teter.

President.

#### DR. KEATING'S REPLY

Chicago, May 28, 1927.

There are three incentives to the bestowal of charity: 1. Benevolence. 2. Vanity. 3. Selfishness. The motives for the first and second are readily understood and are today the same as they were when knighthood was in flower. The motives for the third have changed with times and conditions. Sometimes political, sometimes mercenary, sometimes as a means of livelihood and sometimes for personal aggrandizement.

As a business, charity is so profitable that in Chicago the Association of Commerce finds it advisable to publish an annual containing the names of those, which the Association, with commendable caution says, it believes to be worthy. There are two hundred and sixty-five organizations listed in the report for 1926. These two hundred and sixty-five organizations had a total expenditure for 1926 of twenty-two million six hundred and twelve thousand one hundred and ninety-one dollars and forty-five cents.

The antidote to communism is self dependence, but in order to perpetuate their organizations, many of these societies are in keen competition with other charity bodies to secure the patronage of those, who, if left alone would live within their means and learn to provide for their old age.

Medical charity is also of three kinds. 1. The

service given by the physician to those unfortunates whom he treats as private patients, but from whom he expects no pay. 2. The service given to the dishonest, who evade payment. 3. The service of physicians who head clinics and capitalize on professional prominence. With this introduction, we will proceed to answer Mr. Teter's letter.

Mr. Teter presents two propositions for discussion, the first considers the effect of the Infant Welfare Society upon the public. The second, the effect of the Infant Welfare Society upon the medical profession. He says that twenty years ago, there were not to exceed one-half dozen physicians in Chicago who made a special study of, and were skilled in the care of infants. In this matter Mr. Teter has been misinformed. Among the men who, twenty years ago, restricted themselves to the practice of pediatrics were the following: Christopher, Walls, Quinlan, Houston, Kleinpell, Churchill, Helmholtz, Abt, Brenneman, Lackner, Hess, Mendlewski, Krost, Jampolis, Grulee, Cotton, Vanderslice, Allen, Northrup, Earle, Black, Kraft, Grabow and Dodson.

The Infant Welfare Society takes credit to itself for the very gratifying lower death rate of infants, as compared to twenty years ago. It is not possible to believe that the medical men directing the activities of the Infant Welfare Society can be ignorant of the fact that the lower death rate is not due to the work of the Infant Welfare Society; but to the fact that the Milk Commission of the Chicago Medical Society, by gradually forcing the delivery of pasteurized and clean certified milk to the Chicago public, has been the great factor in saving the babies.

The unfortunate babies of twenty years ago were having their intestinal tracts continually reinfected by the then contaminated milk supply. The most learned pediatricians of today could not cope with a situation of that kind.

The physicians of twenty years ago knew that they were dealing with an infected intestinal tract and tried to meet the situation with medicinal antiseptics. But the moment the baby was given the bacteria laden milk their efforts were undone.

Neither was the mortality rate increased because the babies were treated as little adults.



That phrase was coined by some doctor, who was either a poor thinker or who knew the advertising value of declaring, "What a whale of a difference," when there was and is none. As to babies being treated at that time as little adults, so they are today, because that is what a baby is, a little adult. The doctors of that day knew they were little adults and were aware of the necessity, just as well as we of today are, that they must be treated in accordance with their physical and nervous development.

The principal object of the Infant Welfare Society is supposed to be the sale to the public of the idea that apparently healthy infants must have continuous medical supervision. Publicity is recognized as a great educational force, but in order that the education gained by publicity campaigns be capitalized, there must be an aggressive, well organized and well trained sales organization. The Infant Welfare Society has spent many thousands of dollars and has had the most effective newspaper advertisement, because its advertisements are run as news. It has had the valuable publicity given by the intelligent and well-to-do mothers, who flock to its stations. It has had the help of a large number of recent graduates in medicine, who have given their time at the various stations, partly for the experience and partly in the hope that from the acquaintanceship of the mothers they may become advertised as baby specialists and acquire as patients some of those who are coming to the stations.

A careful study of the situation will prove that their twenty year campaign has been a failure. One of the reasons that it has failed is because neighborhood physicians, the family doctors, have not been consulted. Not one, but many physicians have testified that mothers visiting Infant Welfare Stations have been taught that the family doctor is not capable of feeding infants. Physicians have also testified that the mothers honor them by giving them the night calls.

The Infant Welfare Society offers to the recent graduate the questionable training of a large and quickly gained experience by making it possible with the aid of nurses, for the embryo physicians to see sixty babies in four hours. Such an examination is a farce. The care of each infant is a special problem. It is a special problem because each infant is a law unto it-

self. But by far the greater problem is not the management of the baby, but the management of the mother and the family. The doctor must be both physician and educator; furthermore, he must know the heritage and the family life so that he may appreciate the mental and physical handicaps the infant must face.

It is not sufficient to give a mother a few general directions and expect her to carry out the very complicated technique of the proper care of a child. If the doctor has not aroused in the mother the curiosity that prompts her to ask questions; if he has not made her feel that her greatest hope of success is to a large extent based upon her desire for knowledge and her ability to confirm or discount things told as truths, he has to that extent failed as a teacher. If the mother has not learned how to sense the value and the applicability of things she has been told; of things she has read; of things she has heard that other physicians do for infants in their care, then that mother has not mastered the proper handling of the great problem she has before her.

It requires more than the experience gained at an Infant Welfare Station to make a pediatrician out of any doctor.

Mr. Teter says that as a result of several conferences with a committee from the Chicago Medical Society, it was agreed, "That twelve dollars per week, per member of the family should be regarded as the minimum family income that could at all make it possible to pay doctor bills." This conclusion ignores the different standards of living held by different people. It also ignores the fact that many families with such an income insist upon paying their doctor bills. It further ignores the willingness of the family doctor to give his share of gratuitous service to those of his patients who are unable to pay.

I do not know the personnel of that committee from the Chicago Medical Society, but I do not believe that any bankers' or business men's committee would agree that twelve dollars per week per member of the family should be regarded as the minimum that could at all make it possible to pay interest on borrowed money. Nor for that reason would the banks harbor the suggestion that they should give money without interest and without hope of return of principal. We cannot imagine any bankers' or business men's

committee deciding that under such circumstances the landlord should not collect rent and the merchants should not be paid for what are considered the necessities of life. There is nothing in the list of the established necessities that stands as high as health. The only ones who are in position to deal intelligently in this commodity are the medical profession. Where poverty exists, medical service, like the other necessities of life, must be administered without asking the recipient to pay. The flour and coal that are given to the poor are bought and paid for. Medical service for the poor who are in the class that must be furnished flour and coal, should also be bought and paid for. But there has never been a time in the history of medicine when the physicians in the neighborhood were not willing to give their services free to people unable to pay. To say, then, that people earning a certain income should be given free service by the medical profession is to take a position that is neither financially sound nor economically right.

We will now consider Mr. Teter's second proposition. The effect the Infant Welfare Society has had upon the medical profession. He says that as a result of the work of the Infant Welfare Society there are now five hundred pediatricians in Chicago. Again Mr. Teter is misinformed. If there were five hundred pediatricians in Chicago there would be four hundred and seventy-five too many. He speaks of the fund of knowledge of the medical men of today being on a higher level because of such agencies as the Infant Welfare Society.

The medical profession of today is on a higher level because of the efforts in its own ranks to place it on a higher level, and not because of the activities of any charitable lay organization. In Chicago there are held somewhere between forty and fifty medical meetings a month. These meetings are devoted entirely to the study and discussion of matters pertaining to health and disease. What is being done to Chicago is being done throughout the entire United States. It is doubtful if any business or any profession in the world provides for its members so continuous and lifelong a schooling as does the medical profession.

Over twenty years ago the American Medical Association realized that the preparation of young men and young women for the practice

of medicine was costing more than the tuition fees paid by the students. Through the Council on Medical Education, the American Medical Association began and has since carried on a study of how to meet this situation. It has discouraged the continuance of schools not financially able to carry the burden, and has persuaded them to close their doors.

The Council is entitled to some of the credit for the state and endowed universities that make it impossible for the unfit to graduate from their medical departments. The Council is continually striving to improve medical education. In its enthusiasm to improve methods of teaching, some of its members and speakers too frequently express their views in words that are not always well chosen and are almost certain to cause apprehension and misunderstanding on the part of the public.

There are none who are interested in the welfare of babies to the extent that the medical profession is interested. In the medical profession the two divisions who are most interested in the welfare of babies are the pediatricians and the family doctor.

In the past twenty years the greatest progress in medicine has been the better education of undergraduates. These men have a beneficial influence on those already in practice. The result has been a horizontal educational advance of all general practitioners. Specialists have not made this horizontal upward trend because entrance to the specialties is not regulatory, but inspirational. Too many specialists hinder research and foster the abuse of medical charity.

The present need is for the leaders in pediatrics to establish graduate schools that will confer a degree entitling the holder to proclaim himself a specialist in that field of medicine. Three to five years in general practice should be the prerequisite to entrance in a school authorized to confer that degree. The desire for an easier life and greater financial returns should be sufficient cause to bar any doctor from admission to such a school. General practitioners, who have no desire or intention of becoming pediatricians, should be encouraged to attend for short periods, not only for their own benefit, but for the benefit of the teachers who would profit from such association. Three such schools in the United States would be sufficient. One in New York



City, one in Chicago and one in San Francisco.

The Chicago Medical Society, which includes the County of Cook, has four thousand members. With the present high standard of knowledge possessed by the medical men of Chicago, twenty-five pediatricians are sufficient to supply the needs.

At the present time, the pediatricians, from the highest to the lowliest, are doing general practice. The few most prominent ones, for the most part, confine their attention to the treatment of infants; but even these are making so many house calls and seeing so many babies in their offices, that they have neither time nor physical and mental strength for study, investigation and reflection.

The medical profession must always be divided into two general classes, investigators and practitioners. It is the duty of the investigators to add to the accumulated knowledge and discover any fallacies that may have been considered operative for good. From the work of these men the practitioners acquire their knowledge and the public profits by the application of it.

The pediatrician should see patients in consultation only. The only treatment they should administer should be to the infants in the County Hospital and the hospitals connected with medical colleges. This would work no financial hardship on the pediatricians for they would receive from consultations fees that in the aggregate would equal those they now receive for giving their services in the capacity of general practitioners, at a rate but little in advance of that charged by the family doctor.

The final arbiter of the infant's fate is the family doctor. Whatever discredits his abilities deprives the public of his needed service.

Emmet Keating.

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## BIRTH CONTROL

Peoria, Illinois

April 21, 1927

*To the Editor:* My attention has just been called to an article in the April number of our ILLINOIS MEDICAL JOURNAL by J. J. A. O'Reilly, M. D., of Brooklyn, N. Y., entitled "The Medical, Social, Economic, Moral and Religious Aspects of Birth Control." As our Journal is supposedly published in the interest of the profession as a whole, and not to prop-

agate the particular beliefs or creeds of any part thereof, I take it for granted that a reply to Dr. O'Reilly will be in order and welcome.

As most of the Doctor's article was devoted to that which was not germane to the question, I will refer but briefly to that part and devote most of what I have to say to the question supposedly under discussion. Dr. O'Reilly seems to be laboring under the delusion that Birth Control can be discredited and the arguments in favor of voluntary parenthood refuted by speaking disrespectfully of some of the unsavory characters and organizations that have in a greater or less degree endorsed the movement. By the same method he could as readily discredit the Democratic party, the Republican party, the Medical profession, Christianity and most of the other organizations known to mankind.

Great questions are not settled by substituting tradition, sophistry and prejudice for facts, reason, and judgment. I submit that the Children's Bureau, Uplifters, pekingese pups, chow dogs, Lenin, Trotsky, Soviet Russia, Eugene V. Debs and most of the other subjects in the Doctor's letter have nothing whatever to do with the merits or demerits of voluntary parenthood. Not even the teachings of Malthus and Mendel to which the Doctor referred in some detail are germane to the subject.

In the interest of fairness and good sportsmanship, the Doctor should not have emphasized the unsavory characters and organizations that have at various times and in various ways advocated Birth Control without at least recognizing the thousands of reputable, earnest, moral, Christian, men and women who sincerely believe that voluntary parenthood is a desirable and even necessary step in human progress. An imposing list of such statesmen, scholars, educators, churchmen and humanitarians could be presented, whose intellectual attainments, moral leadership, religious devotion and human sympathies would challenge the best that the advocator of unlimited reproduction can produce. However, such a list would have no more direct bearing on the merits or demerits of voluntary parenthood than does the unsavory characters about which the Doctor makes so much ado. With this brief reference to the major, but irrelevant, incompetent and immaterial part of Dr. O'Reilly's article, now, as he said, let us get down to reason.

The whole subject of Birth Control or voluntary parenthood centers around certain questions and propositions none of which were so much as touched by the Doctor in his article. First: Is it for the "Medical, Social, Economic, Moral and Religious" betterment of mankind that all married people bring into the world as many children as possible, or is it better that they limit their families to such numbers as may be born with reasonable hopes of life, health and happiness for all concerned? I say "married people," for, despite the Doctor's implication to the contrary, reputable proponents of voluntary parenthood do not advocate the dissemination of contraceptive information to those not legally entitled to receive the same.

The advocates of voluntary parenthood have no quarrel with those who believe that reproduction is the chief end of matrimony, and that quantity rather than quality should be the chief aim in reproduction, so long as their progeny does not become a public burden or menace. Voluntary parenthood means voluntary not compulsory limitation of offspring. I, as a believer in Birth Control, have no more right to demand that Dr. O'Reilly limit his offspring than has he to prevent my acquiring and using contraceptive methods to limit mine.

Advocates of voluntary parenthood would place no restrictions upon those who can bring normal healthy children into the world, but would let all parents determine the size of their families at their "Court of Conscience" to which the Doctor refers so reverently. We do, however, object to the advocates of unlimited offspring trying to deny to others the same right of appeal. We do object to the Dr. O'Reillys setting up their "Court of Conscience" as the final arbiter on what information and practices may be permitted to others.

Those whose "Court of Conscience" decrees that limited, rather than unlimited progeny, is desirable must again appeal to their own Court, not Dr. O'Reilly's Court, as to how best to attain this desired end. For such there are two alternatives. They may limit their offspring by fore-swearing all further marital relations and lead a strictly continent life; or they may use preventive measures. One's answer here will depend largely on one's attitude toward still another question; Viz: within the marriage bond,

is sex relation for sex gratification permissible and right when pregnancy is not desired.

If one's "Court of Conscience" answers this in the negative then for such an one continence is the only method of limitation. If one believes that sex relations for sex gratification is not permissible, right then of course one must condemn such relations when for any reason pregnancy is impossible or even improbable. In fact, if one holds such belief, one can sanction indulgence only when conditions for pregnancy are most favorable. To indulge when conditions are unfavorable is to practice a measure of prevention. But even the most rabid advocates of unlimited offspring are usually willing to concede that indulgence during the so-called safe period is permissible and right.

Those who think for themselves will demand more logical reasoning, more convincing evidence, more consistency between theory and practice by those who oppose voluntary parenthood before accepting their unsupported opinion that it is wrong to limit one's family to such numbers as may be brought into the world with reasonable hopes of life, health and happiness for all concerned. Those who are more interested in quality than quantity will doubtless hold that if sexual relations for sexual gratification is permissible and right, then harmless methods of attaining that end are permissible and right. In other words, if it is permissible and right to have relations when pregnancy is not desired it is permissible and right to prevent pregnancy taking place.

Did time and space permit, it would not be difficult to show anyone susceptible to evidence the "Medical, Social, Economic, Moral and Religious" advantages of voluntary parenthood, and that such limitation is a desirable and even necessary step in the solution of many of the difficult problems that have defied man's best efforts at solution throughout the centuries. It could easily be shown that such practices would make most of our charities unnecessary, could be made to solve much of our growing problems of degeneracy and delinquency, prevent most of the frightful suffering and waste of human life due to our more than one half million abortions annually, and even eliminate one of the principal causes of war.

However, I will refer specifically only to the moral and religious aspect of such practices. I



class these two together for, to me, they are one and inseparable. It is argued by the opponents of voluntary parenthood, and maintained by Dr. O'Reilly in his article, that the dissemination of contraceptive information will increase sensuality and immorality. If this were so it would be a serious objection. But is it so? Does anyone really believe that the fear of consequences is the dominant factor in virtue? Does anyone believe that fear is all that keeps one's mother, sister, daughter or oneself from worshipping at the Shrine of Venus? That fear will make people virtuous is a fallacy having little foundation in fact. Fear makes people cautious or reckless, not good. The world wide, age old history of promiscuity, illegitimacy, and venereal disease is proof positive that fear cannot be depended upon to make people virtuous.

There is very little uncontaminated good in life and we are continually compelled to choose between a lesser and a greater evil. Without question the auto has encouraged certain potential criminals to a life of crime. It has also contributed much to sexual delinquency. However, its benefits to mankind have been so great that no sane individual advocates discarding the auto to prevent this modicum of evil. Likewise, even though knowledge of contraceptive practices should come into the possession of those not lawfully entitled to receive the same, and should such information lead to an occasional moral lapse, that would be no valid reason for denying this boon to the vast majority.

That a knowledge of contraceptive methods by those properly entitled to receive such will materially increase the sum total of virtue, morality and human happiness cannot, I think, be successfully gainsaid. One of the strongest incentives to morality is early marriage. But early marriage without some form of Birth Control means too frequent child bearing and large families. Large families too often mean poverty, lack of education and crime. It means tired and worn out mothers and fear of further pregnancies, with conjugal infelicity and domestic discord that drives men and women apart. Late marriage too often means increased prostitution and venereal disease. What is the answer? For the average man and woman there is but one answer: Early marriage and voluntary parenthood.

How will this work out in practice? In Holland, New Zealand and Australia, where such information is available to all lawfully entitled to it, crime, poverty, degeneracy, immorality, illegitimacy and divorce have materially decreased.

In closing let me emphasize that Birth Control, or voluntary parenthood, does not mean abortion or the termination of pregnancy once it has taken place. It does not mean compulsory limitation except in case of those who cannot produce normal children. Voluntary parenthood means for the father that he need have no more children than he can support. For the mother it means that she need not be worn and aged before her time by much child bearing. For both it means that fear of pregnancy need not lead to enforced continence, with resulting domestic discord and dissatisfaction. Voluntary parenthood means for the child that it need not be an unwelcome addition to any home. Instead of being conceived by chance and born by mischance, every child may be conceived in love, born of desire and reared under conditions that will enable it to develop its full powers and possibilities. Voluntary parenthood for the fit and no parenthood for the unfit means the elimination at its source of much of that which is retarding and disheartening in human progress.

WM. HINCKLE, M. D.

#### BIRTH CONTROL: A REJOINDER

New York, May 28, 1927.

*My Dear Editor:*

I have read with much interest the comment of Dr. Wm. Hinckle of Peoria, Ill., upon my criticism of Dr. Knopf's book "The Medical, Social, Economic, Moral and Religious Aspects of Birth Control" (ILLINOIS MEDICAL JOURNAL, April, 1927), which comment is to be published in the June ILLINOIS MEDICAL JOURNAL, and I note that the good Doctor agrees with me that "In the Court of Conscience there are no Acquittals," only the Doctor views this Conscience as an adjustable thing capable of urging one man to exercise sex-control with birth-indulgence to make marriage safe for Society while the other man's urge is to sex-indulgence with birth-control to make marriage safe for libido.

Outside of that essential disagreement the Doctor is right—dead right, *provided that*

In the *medical* order there is no such thing

as a Sympathetic Nervous system and no relativity or reactionary capacity in the physical, chemical and psychic processes which form part of the sexual congress and that the modified Onanism, which acts in bar of completing the sexual act, takes no toll of the physical, social or moral fibre of the individual.

*Provided* that in the *social* order the individual can not react to or influence his environment and that the morality, immorality or un-morality of the individual is a thing apart, to be determined by him without regard to the composite judgment of the little world in which he has his being and that the behavior of that little world is in no wise dependent upon the other little worlds about it.

*Provided* that in the *economic* order the state is not concerned with population-increase or with the maintenance of the balance of power in the middle range of Society so as to act in bar of intolerance through the class consciousness of the intelligentsia or the envy of the proletariat.

*Provided* that, in the *moral* order, any man can enter his marital chamber and deliberately proceed with the sexual act knowing that he and his wife are definitely agreed to enjoy each other's bodies and to see to it that no spermatozoon will have contact with an ovum so as to produce a child of their union until they, themselves, are good and ready, the will of God and the needs of Society and the cravings of the human heart to the contrary notwithstanding, and *provided* that such deliberate stacking of the cards against posterity can have no hereditary effect in shaping the mind and heart of such baby as they, themselves, graciously permit to be born, later—if ever.

*Provided* that, in the *religious* order, this little old world of ours is our oyster and there is nothing beyond and that, as the Doctor's comment would indicate, Conscience is, after all, an adjustable thing that can with equal merit and justice and right say "Credo" to Christ and "Bravo" to Satan, depending altogether upon whether one inclines toward self-control or birth-control.

*Provided* all those conditions, Dr. Hinckle would be right, dead right and my expressed fears for the security of the ideals, traditions and institutions of this nation and my bitter criticism of individuals and organizations back

of this birth-control propaganda; my distrust of the Uplifter; my criticism of High Society permitting pekingese pups and chow dogs to enjoy the creature comforts of His Highness, the Baby; my resentment of the Federal Children's Bureau as an agency for harm to this country, my references to the teachings of Malthus and Mendel and my appeal to the Court of Conscience would, as Doctor Hinckle says in his comment, be "not germane to the subject."

*But*, you see, I know these Birth-controllists and their kind; I know them "by their fruits"; I know these "thousands of reputable, earnest, moral Christian men and women who sincerely believe that voluntary parenthood is desirable, etc., etc.," and who constitute that "imposing list of statesmen, scholars, educators, churchmen and humanitarians. With intellectual attainments, moral leadership, religious devotion and human sympathies"; you see I have been in intimate contact with these decent, trusting people and have sympathized with their discomfiture when they were informed of the facts and they began to realize that they had lent their good American names and given their good American dollars to the support of measures and organizations that were at variance with the ideals, traditions and institutions of the country which they really and truly loved and thought they were serving. We saw a lot of this "endorsement by distinguished leaders and organizations of truly Christian character" at Washington (1921) where they indorsed the Sheppard-Towner Maternity (birth-control) Bill which was initiated by such organizations as the Birth Control Leagues, the Voluntary Parenthood Leagues, the Women's Consumer's League, the Women's Trade Union Leagues, the American Association for Labor Legislation, honey-combed, every one of them, with University, Parlor and Magazine reds. Speaking of reds, it is time these reputable, earnest, moral Christian American citizens gave some thought to the fact that this government is somewhat concerned, just now, over a list of "Reds in America" discovered in the Soviet quarters in London which the British Government has sent to our own State Department.

After the Sheppard-Towner Bill had been put across by these Advance Agents of the Brotherhood of Man with the Soviet stain a lot of those



reputable, earnest, moral Christian endorsers were rather shocked to learn that the basis of the propaganda placed before Congress was a book, published with their tax money, "Children's Bureau Publication No. 57, Maternity Systems in Foreign Countries," which quoted generously and approvingly the writings and teachings of the First Commissar of Lenin and Trotzky's Soviet Russian Department of Public Welfare," Mme. Alexandra Kollontay, for a very short time recently Minister to Mexico, but a trifle too rabid for even that excitable and revolutionary country.

Dr. Hinckle does not believe that fear of consequences is the dominant factor in virtue and that the dissemination of birth-control information could not, therefore, increase sensuality and immorality and asks: "Does any one believe that fear is all that keeps one's mother, sister, daughter or oneself from worshipping at the Shrine of Venus?" Well, if fear of evil be not the complement of love of good, the whole doctrine of auto-suggestion must fall flat as a protective agent in human society.

The good Doctor's assertions are not arguments. "Did time and space permit it would not be difficult to show" . . . "It could easily be shown that such practices (birth control) would make charities unnecessary . . . solve problems of degeneracy and delinquency . . . increase the sum total of virtue." These are merely words and enlighten no one. What does enlighten us is the Doctor's calm assurance that only married people will be eligible for instruction and not all of *them*, and no naughty boys and girls with prurient minds seeking pleasure without pain or payin'. If the Doctor were not an educated man this faith would be child-like; under the circumstances it is childish. Perhaps it is the pure atmosphere of Peoria that makes the mind untouchable by thought of evil, but we in Brooklyn found that the Birth-Control Clinics played no favorites and affected attendance at high school so we got rid of them. No, no, Doctor dear, even if you had a Prohibition Department and a sort of Volstead Act to regulate sexuality and a Director to pass judgment upon the right of John Doe or Jane Roe to receive instruction after a thorough check up of their "marriage cards" and their environment and their lack of artistic temperament or physical

disease and their possession of one child and a parrot and the righteousness of their request to be saved further parenthood until they felt just like it and the conditions were right n' everythin', we would have bootlegging in sexuality among the young single ones and the young married ones. Boiled right down this is the ultimate aim of the birth-controllists, for he winds up his comment with this sentence: "Voluntary parenthood for the *fit* and *no* parenthood for the *unfit* means the elimination at its source of much of that which is retarding and disheartening in human progress."

Then in the body of his comment he says this: "Advocates of voluntary parenthood would place no restrictions upon those who can bring normal healthy children into the world, but would let all parents determine the size of their families at their 'Court of Conscience' to which the Doctor (O'Reilly) so reverently refers." "Whaddya mean, restrictions?" How? Where? Who? Whom? Another Bureau? Register our American women, as Kollontay teaches, like cattle? Now we are getting a little close to the "wanted baby" of these Birth-Controllists and it should be rather easy, from now on, for the "reputable, earnest, moral Christian . . . statesmen, educators and the like" to get a perspective of the vicious, unsavory characters and organizations" which initiate some anti-social measure and ask decent people and organizations to grant them the odor of their sanctity to cover the stench of their own viciousness.

P. T. Barnum was right: "The American public likes to be humbugged" and I don't know of any type of American that falls quicker or harder for sob-stuff about "preferring Hogs to Babies" or saving the "poor, dear American Mothers from being decrepit and worn out by child-bearing" than these same reputable, Christian souled citizens of ours. I wonder if it would not be well for them to sit down quietly and contemplate their own "easiness" and while they are about it let them visualize their own Mothers rejoicing in the opportunity for libido *unconfined*; their own wives or husbands retiring for a moment to adjust a mechanical contraceptive guard; their own daughters sitting in the family Doctor's office listening to him expound the best way to be childless though married. I should love to have a view of the inside of the Birth-

Controllist mind when he tries to justify that policy before the Court of his Conscience on an indictment charging him with rebellion to spiritual inhibitions.

Very truly,  
John J. A. O'Reilly (M. D.)

### INFORMATION WANTED ON WEEKLY CLINICAL CONFERENCES

May 10, 1927.

*To the Editor:*

In the May, 1927, ILLINOIS MEDICAL JOURNAL is an article on "Clinical Conference for Small Communities" by Dr. Ernest A. Kraft of Danville, Ill., which is very interesting to me.

Since the appearance of my article in the December, 1926, number on "The Weekly Clinical Conference" several have been established. I should like very much to know where conferences of this type are being held in the State of Illinois. I will appreciate very greatly information on all of the conferences of this type in progress.

If you will publish this letter with the idea of roll call of clinical conferences in Illinois it will be very greatly appreciated by

Yours very truly,  
G. HENRY MUNDT.

### MEAT EATING AND HEALTH

Of all the speeches made at the recent gathering of the American and Canadian medical profession in London, that of Dr. Wood Hutchison attracted the most attention. The reason for this was that he spoke on a subject which the man in the street can understand and one which has been widely discussed by medical men both in medical and lay press during the past few years. Also Dr. Wood Hutchison expressed views which are not held or taught by the majority of the medical profession, but which are perhaps in consonance with the tastes of most laymen.

There has been to some extent a campaign almost against meat eating by a section of the profession. Possibly, in their zeal for dietetic reform, they stigmatized the consumption of meat more forcibly than was warranted by evidence. Also they may have lauded a vegetarian diet more highly than appears to have been proved by the test of experience. On the other hand, it seems that Dr. Wood Hutchison in his anxiety to show that the new teaching on diet is wrong, or rather does not agree with his views, went further than scientific evidence or even common sense facts go, in his eulogy of meats or of any diet which most strongly appeals to the palate of a patient. In the first instance it may be said that a certain amount of exaggeration has been employed by those who urge

that little or no meat is required to maintain an individual in health. In considering this question many points must be weighed carefully. The occupation of a person, the conditions under which he or she works, age, the climate, personal idiosyncrasies and so on. The young strong man or a man in the prime of life engaged in hard manual labor in the open air, in a cold or temperate climate, can assimilate, and thrive on a quantity of animal food which would be harmful to a man who was doing light work or leading a sedentary life. In the case of the manual laborer in the open air in a cold or temperate climate who will say that meat is not the most suitable food for him?

Although it may be urged that the Italian does work equally hard in the open air on a diet almost vegetarian, the protein he ingests being, as a rule, mostly in the form of cheese. But in the case of the Italian the work is done for the most part, in a warm or comparatively warm climate. Age again is a factor to be considered. After a certain age, the bodily powers fail, and the consumption of a considerable amount of meat may place too great strain on the kidneys and the digestive organs. Moreover, the personal equation must always be taken into account. "What's one man's meat is another man's poison." Habit is another factor which plays a part. If a child is brought up on meat, as New Zealand, Australian and Canadian, most American and British children are brought up when their parents can afford it they seem to do well on it. So do also the Italian children on a vegetable and cereal diet with a certain amount of non-animal protein and they appear to reach a green old age on a fair average of life, on such a diet. It is likely that the meat eating races as New Zealand, Australia and Canada, cited as examples of the beneficial results of meat eating, do not have the lowest death rate in the world merely because they are large meat eaters, but partly because they live for the most part a healthy out of door life in a good climate and are not stinted for food.

In the cities sanitation and hygiene is good and assists in keeping down the death rate. Of course, there is much variance of views on the diet question but as far as civilized life is concerned a few facts seem to thrust themselves forward. One is that, as a rule, the well to do eat more than is good for them and above all eat food which has been overcooked. The poor do not get enough to eat; what they do get is frequently unsuitable, generally of inferior quality and almost always overcooked or badly cooked and lacking in essential qualities.

The great fault of civilized diet is that it is too often overcooked and before being cooked has been robbed of its most nutritive properties. It is allowed on all hands now that a food to be up to the proper standard should contain a more or less definite proportion of the mineral salts and of the vitamin elements. What then does it profit a man if he is given food which even before being cooked has been robbed of some of its valuable properties and is then so cooked that it is robbed of other almost essential properties. It is too sophisticated food and the over-



cooking of food that are among the greatest drawbacks of civilization.

This applies to meat, which is cooked frequently so that little virtue is left in it. Dr. Wood Hutchison is by no means alone in holding that the campaign against meat eating is being carried to absurd lengths. Dr. Harry Campbell has long contended that man is naturally a carnivorous animal and that on protein in the shape of meat he does his best physical and mental work. But Dr. Campbell advises discretion in the consumption of meat and does not recommend it in large quantities for the sedentary or the elderly or aged. He, however, does insist vehemently that the tendency of the age to eat pappy food from which most of the nutritive properties have been extracted and which give no exercise to the jaws, to the salivary glands or to the functions of digestion, is most harmful and responsible for some of the diseases, and for a great deal of the ill health which prevails. Another forcible and pungent writer on dietetics, Dr. Leonard Williams, while he is not at one with Dr. Campbell on the question of meat, is most insistent on the point that food nowadays is overcooked far too much and uncooked vegetables and fruit, which contain all their natural elements including the vitamins placed in them by the sun, should form the greater part of a person's diet.

Dr. Wood Hutchison's refreshingly frank speech has done good in that it has once again thrown the limelight on a subject which is of the first interest and importance to the community and which is still open to argument. Further, it is to the medical man that the public look for enlightenment. Already great progress has been made in the science of dietetics, and the disputed points are gradually being elucidated.

M. J. & Record, July 21, 1926.

#### COLD FEET AS A PATHOLOGICAL CONDITION AND CAUSE OF DISEASE

A. Brauchle has written a monographic article on this subject which does not lend itself to summing up in a brief abstract. The latter may therefore be restricted to the subject of prevention and treatment. If the condition is congenital it is a mistake to use warm or hot water to offset it or to make use of heavy footwear or depend at night on the hot water bottle. Instead the feet should be bathed cold and rubbed warm beforehand. The shoes should always be warm and tight but the stockings loose-meshed and changed often. In warm weather the thinnest footwear is allowed with going barefoot when practicable. The child should be about as much as possible and in study periods should be allowed to get up and run about. Exercises, such as rising on the toes, are recommended. Many other hygienic suggestions are given which apply in general to adults as well as to children. The management of the cold damp foot is very similar. The mechanism of cold feet involves a vicious circle, there being an excessive loss of heat without the reactive hyperemia which should follow. In the cold feet of the neurasthenic and hysterical there is also a state of angiospasm. The conditions

to which cold feet may contribute are manifold—all of the catarrhal and exposure diseases, the neuralgic and rheumatoid, etc. In a diphtheria epidemic the cold-footed children are the first to be attacked. Engelmann has sought to uphold the existence of a law that the more remote the organ from the feet the more apt it is to suffer. If this is so, one would expect cranial neuralgia and rhinitis to be more common in these subjects than enteritis or cystitis.—*Muenchener medizinische Wochenschrift*, December 3, 1926.

#### THE VICTOR IN EVOLUTION

James L. Montague in the *New York Herald Tribune* treats this subject in a way that would meet with general approval even in Tennessee.

"I do not wonder, little bug  
Upon yon cocklebur,  
That you regard me with a smug  
And arrogant hauteur;  
Your attitude of chill disdain,  
Your grim, unsmiling face—  
Though supercilious and vain —  
Denote a conquering race.

"Thus man, no doubt, back in the days  
Of dim and dusty yore,  
Regarded with a cold, stern gaze  
The giant dinosaur—  
Which brute, despite his size and strength,  
And all his mighty kind  
Were driven from the earth at length—  
While man remained behind;

"Remained behind, and brought to heel  
The jungle's strong and great.  
He bade the titan Jumbo kneel  
To bear his puny weight,  
And banished to their distant lairs  
In forest or morass,  
The lions, hippopotami and bears,  
Which soon, in turn, shall pass.

"So, bug, no wonder that you leer  
So gloatingly at me,  
For men shall shortly disappear,  
The while the ant, the bee,  
The jigger and the mite shall whizz  
And flutter æons long,  
For evolution's battle is  
Not ever to the strong."

#### SETTLE BIG QUESTION

Two colored stevedores unloading a vessel at a dock were passing uncomplimentary remarks about each other. Every time they met the discussion was renewed with added sarcasm on both sides.

"Yo' jest keep on pestivating," remarked one of them, "an yo' is sho gwine to be able to settle a mighty big question for de sciuntific folks."

"What question dat?" countered the other.

"Kin de dead speak?"

## Original Articles

### SUGGESTIONS FOR COUNTY MEDICAL SOCIETIES

#### EDUCATION OR ENLIGHTENMENT OF THE PUBLIC

G. HENRY MUNDT, M. D., F. A. C. S.

CHICAGO

The objects of medical organizations today are about the same as when they first were formed, however there is some reason to stress some of these objects or we may lose our position with the public.

In 1784 when the New Haven Medical Association was organized one of the objects was "to appoint a committee for the purpose of examining candidates for the profession, and give certificates to the deserving." This prerogative of medicine has been taken from us probably because of failure of medical men to appreciate its importance, and doubtless as a consequence no effort was made to retain this very important privilege of passing on the men who wished to enter the practice of medicine. Medical men have always been reticent about looking to their own welfare and that of the profession. The reason for this paper is to stress some of the proper activities of a medical society so we may lose no more of the enviable standing medicine has today.

None of the suggestions herein contained are original; they are the personal views of the writer gained from observation of county medical society activities in Illinois and a rather careful review of suggestions made by many writers on the subject.

There are two proper reasons to justify the existence of a county medical society, and if by chance some underestimate the importance of the county society, he should remember that the county society is the basic society of which the great Illinois State Medical Society and the American Medical Association are composed, and that a chain is no stronger than its weakest link. It should be the desire of every member to see his county society do the best work it possibly can and do everything in his power to help it; this of course should be especially true of the officers. One of the most important things

for any organization is to have an active efficient secretary and this is especially true of the county medical society. If there is any county society with a poor secretary he should be replaced at the next election and the county which has a good secretary should keep him in that position.

The two proper functions of a county medical society are:

1. Education or enlightenment of the public.
2. Presentation of programs to keep its members enlightened on the progress of medicine.

One may measure the worth of any activity by the question: *Is It For The Benefit of The Public?* If it is, it is a proper activity and cannot fail of success, while if it is not it is bound to react to the detriment of medicine. The plastic period of life is childhood and this plasticity decreases as we grow older. As a consequence the earlier in the life of an individual we can implant the importance of the profession the more valuable is the work. From this thought the importance of preschool examination can be seen, and it is a proper activity of a county society to engage in this work in any way they desire. The local society must make the decision as to what they want to do, but if there is any question as to the desirable action a letter to the Educational Committee of the Illinois State Medical Society will secure the opinion of a group of men who have given this thing great thought and have had the opportunity of observing the result of this in many localities.

A county society will perform a very valuable piece of work if it has a lecture or demonstration before the schools and high schools in its county. The Educational Committee is in a position to help any county along this line. The writer feels that there is little need to argue the importance of this activity.

There are in every locality many lay organizations interested in the physical welfare of children and adults and it is entirely up to medicine whether we are to lead in these movements or to follow; in other words, are we to be the architects of the health house or are we just to be workers? Personally I feel that medicine should leave no stone unturned to put themselves in control of these many activities. Probably the best



method of doing this would be for the county society, once a year, to have a meeting called by it to which all official and unofficial health organizations are invited and have a free frank discussion of health matters of the community. This doubtless would enlighten many honest but unthinking persons on the attitude of the profession in health matters and incidentally it will place the responsibility for personal and community health where it belongs; that is, in the hands of medical men.

It is desirable for medical men to appear on the program of all types of lay organizations, such as parent-teacher associations, women's clubs, luncheon clubs such as Rotary, Kiwanis, Lion, Associations of commerce, etc., etc. It should be one of the efforts of a county society to try to find men who can do this work and do it well; if that man does not exist in the county try to develop them. It is not, however, the most prominent men who always do this work the best. Another thing about this type of activity is that it should be known what the speaker is going to say. A safeguard against a poor presentation would be to work with the Educational Committee which has had an abundance of experience and knows the pitfalls of this work.

Newspaper publicity is a good work and the society which can arrange for publication in their papers can secure from the Educational Committee material to be published over the signature of the county society. Newspapers in nearly all cities like to publish what is going on in the city that day or week and I have looked through the papers in a number of places where no mention of a meeting could be found. I can't but feel that it is good publicity for medicine to have it prominently placed in the newspapers of the county that The Blank County Medical Society is having a meeting today with a program as follows.

PRESENTATION OF PROGRAMS TO KEEP ITS MEMBERS ENLIGHTENED ON THE PROGRESS OF MEDICINE

A county society should have at least nine meetings a year. It seems it would be difficult to maintain an active organization with much less. The primary function of these meetings

should be scientific discussions; however, some attention should be given to the social side of life and for this purpose luncheons or dinners serve a fine purpose. In some counties a picnic once or twice a year seems to serve a very valuable function. There seems little doubt that at least once a year there should be some kind of a get together where the wives of the members should be entertained.

There would probably be some dissent from the idea I am now proposing but I feel that it would be desirable to devote at least one meeting a year to the economic questions of our profession.

Programs should be a mixture of outsiders and local men. There is no doubt that a society loses much by not having its own men on its programs. One should remember that a county society is for the benefit of its members and unless the members are involved in presenting the programs they lose much of the benefit which should accrue to them. Some medical men from a distance should be on the program each year but a majority of the programs should be presented by members. At the present time clinics are very popular and for that reason a society probably would do well to have one or two clinical programs a year. An effort should be made to correlate the programs presented so some definite ideas can be accomplished each year. Also if possible the programs should be arranged with the needs of that community in mind. If your county needs obstetrical discussion give time to that. If the crippled child is a factor in the community consider that subject. It will not be difficult to arrange a series of valuable and appropriate programs if some thought is given to the group rather than to the single meeting.

The Scientific Service Committee of the Illinois State Medical Society has developed a program service for county societies and will, I am certain, cooperate with any society to improve its work.

In closing let me remind you of what Theodore Roosevelt said: "Every man should devote a portion of his time to the advancement of the profession of which he is a member."

25 E. Washington St.

## A SUGGESTION IN THE TREATMENT OF IMPACTED FRACTURE DISLOCATION OF THE EPIPHYSES

HILLIER L. BAKER, M. D.

CHICAGO

In impacted fracture dislocation of the epiphysis due to direct trauma, there is often difficulty in reduction without resort to open operation. A method which I have used successfully in two cases is reported, not for its originality (for it is an old principle), but because of its simplicity and the excellent results obtained.

Case 1. M. McL., nine years of age, was struck by an automobile Dec. 24, 1923.

The wheel of the car passed over her left ankle. On examination a slight ecchymosis and swelling were

the ankle. The impaction of the fragment was so great that reduction was impossible.

The ankle was then placed on a well padded sand bag. A like padded sand bag was placed over the region of the internal malleolus.

With an ordinary wooden mallet the dislocated fractured epiphysis was gently hammered into place. A



Fig. 1. Case 1. Before Reduction.

noted over the internal malleolus. The internal malleolus was very prominent. On x-ray examination a fracture dislocation of the lower tibial epiphysis with a lateral displacement of the tibia and impaction of the fragment was found.

The patient was anesthetized and under the fluoroscope an attempt was made to reduce the fracture dislocation by extension and manipulation of the leg at



Fig. 2. Case 1. After Reduction.

posterior moulded splint was then applied. Active motion of the ankle joint was begun in ten days.

The patient was allowed to walk in six weeks. The patient has been observed at intervals since the accident. Function of the joint is perfect. There is no shortening or evidence of disturbance of growth in the leg.

Case 2. M. B., eighteen years of age, was struck by a rapidly moving automobile. On examination there was great deformity in the region of the knee joint with medial displacement of the patella and what ap-



peared to be a lateral and upward displacement of the lower epiphysis of the right femur. There was no disturbance in the pulsation of the anterior or posterior tibial arteries.

X-ray examinations disclosed a fracture dislocation



Fig. 3. Case 2. Before Reduction.

through the lower epiphysis and anterior portion of the shaft of the right femur, with the distal fragment rotated outward and displaced outward and forward.



Fig. 4. Case 2. After Reduction.

The patient was anesthetized and under the fluoroscope reduction was attempted by extending the thigh with the knee flexed, using counterpressure to bring the

fragment in place. The fragment was so firmly impacted that reduction could not be accomplished. By the use of sand bags and a mallet as described the displaced fragment was gently forced into place. A great deal more force was needed in this case than in the first one, however. The part was then encased in a plaster cast with the knee in semi-flexion. In three weeks the cast was removed and the patient walked with the aid of a crutch. On examination, Aug. 24, 1926, there is no limitation of motion in the knee joint. Flexion at the knee is equal to that of the uninjured knee. No demonstrable shortening of the injured femur could be found.

This method of reduction of impacted fractured dislocation of the epiphyses is worthy of a trial for its simplicity.

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 1338 W. 63rd Street.

#### SOME CAUSES AND METHODS OF TREATMENT OF CHRONIC DIARRHEA\*

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 CHICAGO

It is sometimes of practical value to discuss the nature and treatment of some particular symptom in order to develop a routine method of examination and to prevent errors of omission which are so frequently the cause for an incorrect diagnosis and faulty treatment. This is especially true of chronic diarrhea, a symptom which may be due to conditions in the bowel or to some disturbance elsewhere in the body and unassociated with any demonstrable change in the intestinal tract.

We, therefore, emphasize the three following important principles which are based rather on clinical observations than on experimental work with the view of aiding the general practitioner who is the first to see these patients and on whom a great responsibility rests for the correct treatment and prevention of spread to others if the condition is of such a nature:

1. Every patient with chronic diarrhea should be examined with the procto-sigmoidoscope in order to determine the existence of inflammation, ulceration or new growth in the lower bowel.
2. A complete physical examination should be made in every instance in order to find the cause if it exists outside of the intestine itself.
3. One or more microscopical examinations of

\*Read before the Chicago Medical Society, Feb. 2, 1927.

the stool should be made in order to find a causative organism such as the *entameba histolytica* or other parasite.

The application of the first principle, namely, that every case of chronic diarrhea should have a procto-sigmoidoscopic examination, is well illustrated in instances of so-called "non specific ulcerative colitis." This condition is easily recognized by this method and we shall be spared the possibility of mistaking it for bleeding hemorrhoids or of overlooking a malignancy of the sigmoid or upper part of the rectum.

Non specific ulcerative colitis is characterized by an ulcerative condition of the mucosa of the lower bowel with resulting continuous or intermittent, intractable, bloody diarrhea and often with abdominal pain, anemia, some fever and marked loss of weight and strength. The process usually begins in the rectum and lower sigmoid extending upwards and in some instances reaching the cecum or lower ileum. The mucosa as seen on proctoscopic examination is red and so fragile that mere contact with a cotton swab is sufficient to produce bleeding. An exudate of mucus or pus may be seen in many places and the characteristic, shallow, whitish ulcers often very numerous and of various shapes and sizes, can be easily seen. The later stages of this condition may be recognized by the coexistence at the same time of small, pitted scars from previously healed ulcers together with the picture just described. Still later stages may reveal an intact mucosa with numerous, shallow, pitted scars, the result of healed lesions in the mucosa. J. A. Bargen and A. H. Logan have isolated a Gram positive diplococcus from these ulcers in 80% and they believe this organism responsible for this condition. A vaccine filtrate has been prepared from these diplococci and injected subcutaneously with excellent results in many instances. Time alone will tell whether we are dealing with an actual, permanent cure or with prolonged intermissions. We also continue the usual form of local and dietetic treatment which will be described later in addition to the vaccine filtrate. An interesting case from our private practice will serve to illustrate the prolonged suffering and the frequent useless surgical procedures which these patients often undergo before finding relief in simple therapeutic measures.

Case 1. H. K., a young housewife 25 years old, had been suffering from chronic diarrhea and bleeding from

the rectum for about 12 years. There was some pain in the region of the sigmoid and rectum. The stools contained mucus and about a tablespoonful of blood of variable color. She was nervous, weak and had lost a great deal in weight and strength. Because of her abdominal pain and bleeding from the rectum she had had successively an appendectomy, a salpingectomy and a perineorrhaphy. One month ago she had a hemorrhoidectomy for supposed bleeding piles but her condition remained unimproved. Physical examination revealed nothing except tenderness along the entire colon. Numerous microscopic examinations of the stool failed to reveal pathogenic amebae or other parasites. Proctoscopic examination showed the bowel to be very spastic and the mucosa was intensely red and very fragile so that mere swabbing produced bleeding. Numerous shallow ulcers were present throughout the mucosa. The white margins of these ulcers stood out in marked relief against the very red surrounding mucosa. The patient was put to bed, a residue poor diet was ordered and periodic colonic irrigations with warm chamomile infusion were given. The Gram positive diplococcus was isolated from the base of the ulcers and a vaccine filtrate was prepared and given subcutaneously every third day. The patient has remained well for six months, has gained in weight and strength and is now performing her usual duties without fatigue or nervousness.

Malignancy of the lower bowel when inaccessible to the palpating finger or not demonstrable by Roentgen examination is another condition which can be easily recognized by the sigmoidoscope. It is of importance in this connection to emphasize the fact that carcinoma of the colon or rectum may manifest itself clinically by diarrhea rather than by constipation. In a previous clinical study of 60 consecutive cases of proved carcinoma of the colon we found diarrhea to be present in 30%. Diarrhea alone was the outstanding symptom in 6 cases while diarrhea alternating with constipation was present in 12 additional instances. A similar study of 69 consecutive cases of carcinoma of the rectum showed that diarrhea was present in 22 instances or in 32%. These findings emphasize the fact that carcinoma of the lower bowel may cause diarrhea in nearly a third of all cases and when digital examination reveals no pathology, we should make use of the procto-sigmoidoscope in order to explore the lower sigmoid and upper rectum as these regions do not lend themselves well to Roentgenological examination. This method of examination is also of value in differentiating ulcerative colitis, bleeding hemorrhoids and neoplasms of the lower bowel. We do not believe we overstate when we say that the early use of a proctoscope would pre-



vent the too common error of mistaking a bleeding carcinoma for bleeding hemorrhoids and early treatment in such cases would greatly improve our results in these conditions. The value of proctoscopy in cases of hemorrhage from the bowel may be illustrated by the following case admitted to our ward in the Cook County Hospital.

Case 2. A, L., a laborer 36 years of age, came to the hospital because of persistent bloody diarrhea of six months duration. He did not feel very ill and had not lost much weight. There was some abdominal discomfort. Physical examination revealed nothing abnormal and rectal examination failed to reveal a palpable mass. An Ewald test meal showed an absence of free Hcl with the fractional method but Roentgenological examination showed no evidence of carcinoma or other lesion. Proctoscopic examination showed a mass as large as an apple with an ulcerated surface and bleeding surrounding mucosa. This mass was about 10 cm from the anus and we had just missed it on digital examination. We later made another digital examination and by the use of some force we could just touch the carcinoma with the tip of the examining finger. This patient was admitted as a bleeding ulcerative colitis and had been treated as such for six months outside of the hospital before admission. Much valuable time was lost because a proctoscopic examination was not made previously when proper treatment would have resulted in very good prospects for an absolute cure.

The second principle, namely, that every patient with chronic diarrhea should have a complete physical examination is of value when we are dealing with patients in whom the presenting symptom is looseness of the bowels but in whom the cause lies elsewhere in the body than in the intestinal tract.

This group is numerically very large and includes a great number of conditions. Time will not permit us to mention all of them but we shall select the more common diseases as examples which cause diarrhea due to conditions existing outside of the bowel. A common disease of this type is pulmonary tuberculosis in which the diarrhea is often very persistent, even when no actual ulceration of the bowel exists. Persistent diarrhea may occur in the early stages of pulmonary tuberculosis, long before there is any demonstrable anatomical lesion in the intestine. The cause of such a diarrhea is said to be some toxin elaborated by the bacillus tuberculosis but it is possible that it is due in great part to the achlorhydria which is not uncommonly present in early cases and the diarrhea would then be of the so-

called gastrogenous variety due to absence of free Hcl in the stomach contents. Chronic diarrhea in pulmonary tuberculosis may also be due to actual tuberculous ulceration of the lower ileum or colon and is then frequently a manifestation of a later stage. The stools seldom contain large quantities of blood such as are seen in non specific ulcerative colitis but occult blood is a frequent occurrence. The diarrhea may be continuous or intermittent and both forms are quite resistant to treatment. Tubercle bacilli may be found in the stools if looked for diligently and proctoscopic examination may reveal ulcers associated with tubercles if the lesions are low enough to be reached by the instrument. What we wish to emphasize is the necessity of examining the lungs as a routine in all cases of chronic or recurring diarrhea as the cause may be found there, especially if the pulmonary findings are well marked. The treatment of this condition depends on removing the cause and employment of a residue poor diet of high caloric value together with cautious use of intestinal astringents.

Another condition which may cause chronic diarrhea is achlorhydria, either primary or secondary in nature. This form of diarrhea which is called "gastrogenous" because it is supposed to be due to an absence of free Hcl in the stomach is present in about one-third of all cases of achlorhydria. The exact reason for this form of diarrhea is not definitely known but the most accepted explanation is that the bowel is irritated as a result of infection because bacteria are not destroyed in the stomach due to absence of the antiseptic action of the free Hcl or that irritation of the intestine results from the too rapid transit of undigested food from the stomach into the bowel. Such rapid emptying from the stomach can easily be seen on Roentgen ray examination. The fact that diarrhea develops in only a third of the cases with achlorhydria can perhaps be explained by assuming that the pancreatic and intestinal juices are capable of compensating for the disturbed gastric digestion in the remaining two-thirds. There is no clear cut picture of gastrogenous diarrhea. There is usually no colic, the stools number from 4 to 6 daily and contain no mucus or blood and are soft but not watery. The increased frequency is sometimes noticed chiefly in the morning or soon after meals. The treatment for this form of diarrhea consists of a diet which requires little gastric

digestion and dilute hydrochloric acid should be given in sufficient quantities before, during and after meals. Foods containing connective tissue should be finely ground or avoided altogether as most of the connective tissue is digested in the stomach normally. Whiskey or beer or other possible causes for the achlorhydria should, of course, be removed. An interesting form of what may be gastrogenous diarrhea in diabetics was described by B. D. Bowen and A. H. Aaron. They report a series of 10 cases of diabetes in which achlorhydria was determined by the fractional method and in whom diarrhea was present. It is interesting to note that three of these were very sensitive to insulin.

Hyperthyroidism is a condition in which recurrent diarrhea is not uncommon. We studied a series of 125 consecutive cases and found that 21 or 17% suffered from chronic recurring diarrhea. This condition is an excellent example of the necessity for a complete physical examination in order to determine the nature of the chronic diarrhea and its treatment. Here is an example where surgical removal of most of the thyroid is the most important single factor in curing the intestinal complaint. A study of the diarrhea in our series of cases showed that some were continuous, some intermittent, lasting but a few days at a time, and others alternated with constipation. The stools were usually watery and seldom contained blood. Pain was an infrequent accompanying symptom but marked loss of weight was sometimes seen due perhaps both to the increased metabolism of the hyperthyroidism and to the loss of food in the abnormally frequent stools. This form of diarrhea is to be distinguished from the severe gastro-intestinal crises in hyperthyroidism in which there are marked prostration, vomiting, diarrhea and perhaps jaundice. The treatment of diarrhea associated with hyperthyroidism consists of the use of Lugol's solution, rest in bed and an ice bag to the thyroid together with a residue poor high caloric diet and suitable intestinal astringents. Many of these cases do not have normal stools until a partial thyroidectomy is performed.

Case 3. A young woman was referred to us complaining of recurring diarrhea, the last attack having persisted for several weeks. There were moderate abdominal pains and no blood was observed in the soft stools which numbered from 4-6 daily. Numerous microscopical examinations of the stools failed to reveal amebae and a procto-sigmoidoscopic examination

revealed a mucosa which was somewhat pale but otherwise in a normal condition. Physical examination showed the typical eye signs of hyperthyroidism, there was a moderately diffuse enlargement of the thyroid together with a rapid pulse and fine tremor. A basal metabolism test showed a result which was 48 per cent. plus. This patient, who had previously resisted all treatment, was placed on Lugol's solution and on a residue poor diet of 4,000 calories. She showed immediate improvement and left the hospital in two weeks completely relieved of her diarrhea.

Still another condition which may cause diarrhea is pellagra. This disease is not common in general practice in this vicinity but we have had 32 cases during the past year at the Cook County Hospital. It is possible that pellagra is not so rare among the poorer classes and it is well to keep this condition in mind when dealing with poor, transient patients. Diarrhea was present in 21 instances or in 65% and many of the patients came to the hospital with this symptom as the chief complaint. The diagnosis is easily made by recognizing the skin lesions on the hands. The importance of recognizing pellagra as the underlying cause in a case with chronic diarrhea lies in the fact that the treatment with fresh meats and fresh vegetables is almost in direct contrast to the residue poor diet given in ordinary ulcerative colitis or diarrhea due to the other causes.

Time will not permit us to discuss numerous other conditions which may be associated with diarrhea nor can we describe the various intestinal dyspepsias both fermentative and putrefactive as described by Strassburger and Schmidt. Some of these conditions will be described by those who are going to discuss this paper but there is one disease which we shall discuss in some detail because of a prevalent notion that it is not common in Chicago and also because it is perhaps the best illustration of our third principle, namely that every case of chronic diarrhea should have one or more microscopical examinations of the stools.

We refer particularly to amebic dysentery, a disease usually considered as common only in the tropics or in persons who have come from those regions. Quite recently we have been struck by its presence in people who have never been out of Chicago. We have had 10 cases in our private practice and 40 cases were admitted to the wards of the Cook County Hospital during the last 12 months who suffered from diarrhea and in whom the *Entameba histolytica* was found. A clinical



survey of these 40 patients throws an interesting light not only on the disease as it affects the patients themselves but the danger they present to the general community if they are undiagnosed and not strictly quarantined. It is safe to say that such patients are as dangerous to the general public as are so many ambulatory cases of typhoid and probably more so because patients with amebic dysentery do not have a high fever and can often go about their business. The fact that many patients with amebic dysentery have not been diagnosed correctly increases the danger of spreading the disease. It is interesting to note that only 14 or 35% of the 40 cases coming to the Cook County Hospital were diagnosed correctly before being admitted and that some of these 14 were readmissions for a recurrence. Some of these patients came to the hospital with diagnoses varying from bleeding hemorrhoids to tuberculous peritonitis or mucous colitis and all of these incorrectly diagnosed patients would have been a constant menace to the community had they been permitted to go about freely. It is also interesting to note that only 7 of the 40 patients had been outside of Chicago and 6 of these 7 came from labor camps in Illinois. The seriousness of the disease to the patient may be judged from the fact that 5 patients died, showing a mortality of 12% or one approaching the death rate of typhoid fever.

A study of the clinical aspects of the cases of amebic dysentery admitted to our wards showed that quite a number began with a sudden onset and very closely resembled an attack of ordinary diarrhea. Others began only a few days before admission while still others had had frequency of watery stools for some time. The number of stools varied in frequency from 4 to 30 per day but there were seldom any appreciable fever or leukocytosis. We regard the absence of severe toxemia, high fever and marked leukocytosis as of distinct aid in diagnosis. The actual diagnosis is made by finding the *Entameba histolytica* in the stools. We wish to point out that we should not be satisfied with one or only a few microscopical examinations of the stool in a given case of chronic diarrhea.

Case 4. This is illustrated by a patient who came to us and in whom we found numerous small, apparently superficial ulcers and a very fragile mucosa in the sigmoid on proctoscopic examination. Several stool examinations for ameba failed to reveal any and the patient was improving under bed rest, residue poor diet

and small doses of tincture of opium. Nevertheless we continued to examine the stools daily for amebae and were about to discharge the patient at the end of 2 weeks after 14 examinations of the stools were made. Examination of the stool on the 15th day revealed numerous actively motile amebae in which ingested red blood cells could plainly be seen.

While it is true that this may be an exceptional case and amebae are probably detected in the stools in about 98% in three consecutive examinations, we feel confident that some cases may escape recognition because we do not look for a sufficiently long time and these patients then become a source of danger to others. This particular case may be compared with similar occurrences in patients in whom pulmonary tuberculosis is suspected and in whom tubercle bacilli are found in the sputum only after numerous examinations. It is very important to collect and examine the specimen under proper conditions otherwise the amebae will be easily missed. The parasites may be seen by examining the swabbings from the ulcers or looking at preparations from warm stools obtained either by using a rectal tube or by examining the fresh stool immediately after the bowels have moved. We should not be satisfied with only a few examinations but we must persist until convinced that no amebae or other parasites are present.

We also wish to say a few words about the treatment of amebic dysentery. The patients are put to bed and given a diet which is poor in residue, consisting of cereals, broth, butter, white bread, rice, custard, noodles and boiled milk if it is well tolerated. Not all patients can take milk as it may cause pain and distention. There is no way to tell in advance whether a given patient will be able to take this desirable food and the only way to find out is by actual trial. Emetin hydrochloride is given subcutaneously in doses of  $\frac{1}{2}$  grain twice daily for twenty doses. The drug is then discontinued in order to prevent toxic symptoms which sometimes develop from using it for too long a period of time. We then give stovarsol, an arsenical preparation, per mouth in  $\frac{1}{2}$  gram doses two or three times a day for a week and then return to emetin for another series of 20 doses. Emetin subcutaneously is alternated with stovarsol per mouth as just outlined for at least 2 months after the amebae and all symptoms have disappeared. The diet is gradually elaborated and the patient instructed to return as soon as he notices any irregularity in the stools. The

after treatment is purposely prolonged with weekly stool examinations in order to prevent a recurrence which is so frequent. We should be just as careful in watching for evidence of recurrence in amebic dysentery as we are in lues. Symptomatic treatment is sometimes necessary. Severe abdominal pain is best relieved by small doses of tincture of opium with belladonna. Bromides may be necessary for the nervousness which chronic cases develop and tonics may be required during convalescence to hasten complete recovery. The discussion on treatment would be incomplete if we did not mention the prevention of some of the sequelae of amebic dysentery. Unfortunately emetin is not as effective against the encysted forms of the *Entamoeba histolytica* as against the motile forms. This may help to explain some of the later recurrences or appearance of liver abscess many years after the pathology in the colon is apparently cleared up. The treatment of abscess of the liver or brain belongs properly in the realm of the surgeon but there is one condition which we can and should prevent and that is stricture of the bowel. These cases are very difficult to treat and surgery is usually the only method available. Even surgery cannot promise perfect results because the intestinal wall both above and below the stricture is usually chronically inflamed and the surgeon has to work with pathological tissues.

A private patient of ours will illustrate several of the points under discussion, namely, the failure to recognize the true condition because for 12 years no one ever thought of looking for amebae in the stools and the possible late results in such cases when proper treatment is withheld for too long a time. When such an examination was finally made the parasites were easily found on the first attempt. Unfortunately stricture formation had already begun and great difficulty was encountered in attempting to pass a sigmoidoscope. The dysentery was finally cured by emetin but the stricture remained and is constantly growing smaller.

Many other examples could be cited showing the importance of microscopic examination of the stools in diarrhea. Various intestinal flagellates and other parasites can be discovered only in this way and negative results, if constant on repeated examinations, are also of considerable value in directing our attention elsewhere.

It is impossible to describe all the causes of chronic diarrhea. We have purposely omitted the various forms of bacillary dysentery, as our aim is only to outline a method of procedure in such cases so that we shall be less likely to overlook

the more obvious causes and in that way to shorten the illness for the patient as well as to prevent the spread of a condition from one person to the general community.

Resume:

1. Every patient with chronic diarrhea should be examined with a procto sigmoidoscope.
2. Cases of chronic or recurring diarrhea should be submitted to a complete physical examination.
3. Microscopic examinations of the stool should be repeated until we are satisfied that the cause lies elsewhere in the body than in the intestinal tract.
4. Amebic dysentery is not uncommon in this vicinity even in persons who have not been out of the city.
5. Great care should be used in continuing the treatment of amebic dysentery after the intestinal symptoms have stopped and after the parasites have disappeared from the stools as recurrences are not uncommon.

#### DIAGNOSIS OF LUNG TUMORS\*

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Tumors of the lung are usually carcinomata of the bronchi; more rarely sarcomata and very often they cannot be differentiated from tumors of the pleura that have extended into the lung. The differentiation of mediastinal tumors from lung tumors is not very simple, and tuberculosis originating in the hilus of the lungs may give a similar clinical picture.

The clinical signs of carcinoma of the lung are those of a slowly infiltrating process extending into the lungs. In addition to the irritating cough, bloody expectoration occurs very early and in some cases looks like raspberry juice. However, the presence of blood in the sputum is not essential for the diagnosis, and it is sometimes absent. In other cases the patient complains only of severe pain in the intrascapular region, and the irritating cough may occur in paroxysms, simulating whooping cough.

A history of progressive loss of weight, pain in the chest, cough, bloody expectoration and absence of fever in a patient past forty, who

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gives no history of pulmonary tuberculosis, is very suspicious of malignancy of the lung. This is particularly true in metastatic carcinoma, where a primary neoplasm of the breast, stomach or elsewhere is present. A negative sputum and tuberculin test strengthen the diagnosis.

I have made it a practice to examine the chest thoroughly in all cases of carcinoma of the breast, for evidences of metastases into the lungs. A stereoroentgenogram is also made. If there are any evidences of lung involvement the

toms of malignancy, such as loss of weight, strength, etc. Compression of the esophagus or recurrent laryngeal nerve may cause dysphagia or hoarseness. Metastases to the brain and spinal cord may occur.

The physical signs depend on the size and location of the tumor. It is usually situated in the region of the hilum, and if small may not give rise to any physical findings. A growth into a bronchus causes signs of bronchostenosis. If it extends to the periphery and forms a large



Fig. 1. Case I. Tumor of left chest (lung or pleura)

patient is saved the torture of a radical amputation of the breast. Unilateral bronchostenosis indicates carcinoma of a bronchus. At times the signs of putrid bronchitis or gangrene of the lungs complicating carcinoma of the bronchi are the first symptoms to call attention to the disease.

Lung tumors not rarely cause elevation of temperature. In the later stages of the disease effusion into the pleura takes place, which is usually hemorrhagic, and symptoms of compression, such as local edema and cyanosis of one side of the face or arm may occur.

In carcinoma of the lung 1.83 per cent. of all cases are primary. A patient previously in good health begins to cough, at first without expectoration, later with mucopurulent and bloody sputum. Dyspnea then develops and later becomes marked. Pain is usually constant in the chest and may be referred to the axillary region, sternum, shoulder or abdomen. In addition, the patient may complain of intrathoracic discomfort and pressure, associated with the usual symp-

Fig. 2. Case I. Diagnostic pneumothorax, showing compression of tumor, with separation of tumor from pleura. Air seen ascending pleural cavity. Heart pushed to right. Depression of right diaphragm. Diagnosis: Tumor of Bronchus (Sarcoma).

sized mass the physical findings of dullness or flatness, diminished breath sounds and vocal fremitus are present. Primary lung tumors are usually situated in the upper portion of the lung, whereas metastatic tumors are found in the lower portions (carcinoma of the breast and thyroid). From the physical findings alone the diagnosis at times is impossible.

There are usually two groups of physical findings: First, those referable to the lungs, extending peripherally toward the pulmonary surface and at times into the pleura, and, second, involvement of the root of the lung, with extension into the lung, the mediastinal glands or both. The pulmonary form is usually associated with unequal respirations, dullness or flatness, diminished or absent tactile fremitus, voice and whispered sounds and a respiratory murmur. Rales are usually absent in uncomplicated cases.

Neoplasms at the root of the lung usually give

findings similar to those of enlarged mediastinal glands. Thus, one finds dullness to either side of the upper sternal region in front and the upper dorsal spines behind. Atypical murmurs due to compression of the great mediastinal vessels may be heard. Partial occlusion of a main bronchus may be suggested by the presence of a peculiar bronchial murmur, heard at one or the other side of the spinal column at the level of the hilus of the lung. On inspection a local prominence of the chest wall may be seen. In many cases the pleura may be involved, which results in the findings of pleural effusion. Rapidly recurring

Thoracentesis may reveal bloody pleural fluid, if the pleura is involved, which when examined microscopically may reveal tumor cells, endothelial plaques and a small number of lymphocytes. The fluid is usually bloody at first and later becomes chocolate colored. Microscopically one may see many typical or atypical mitotic figures. If the pleura is not involved, tapping of the chest usually meets with a fairly resistant mass, which frequently is bloody in character.

Bronchoscopic examination, properly carried out, may reveal a neoplastic mass which occludes a primary bronchus. Under proper measures a



Fig. 3. Case II. Tumor of right chest (lung or pleura)

effusion in the pleura, even if not hemorrhagic, is very suspicious of malignancy.

If there are signs of bronchostenosis with atelectasis one may find inequality of the radial pulses, tracheal tug, dilatation of the superficial veins of the chest wall, and at times displacement of the heart. Diagnosis in the beginning is not very simple. One should note especially metastatic swelling of glands of the neck, and also primary tumor in other parts of the body.

The sputum may be blood-tinged and contain tumor fragments, fatty globular nuclei, and large fatty cells. The tumor fragments which are coughed up can be examined microscopically. The fresh sputum is usually mixed with normal saline solution and examined in a flat glass dish, with a black background, and coherent balls or masses are carefully teased apart.



Fig. 4. Case II. Diagnostic pneumothorax. No pleural adhesions. Complete separation of tumor from pleura. Diagnosis: Lung tumor (malignant).

section or piece of this mass may be removed for microscopic examination. Iodized oil or lipiodol introduced into the trachea may show the location of the obstructed bronchus when the roentgenogram is taken.

In 1920, Alexander, Stoecklin and Fischberg advised the production of artificial pneumothorax for the diagnosis of lung tumors. Stahl<sup>1</sup> also suggested filling the stomach with air in addition to the pneumothorax. The injection of a few hundred cubic centimeters of air into the pleural cavity gives valuable information at times, especially in those obscure chest cases in which one cannot differentiate between an interlobar empyema and a lung tumor. A bronchial carcinoma leading to atelectasis of an entire lobe of the lung gives a very distinct roent-



genogram, which is very easily confused with an interlobar empyema, especially if there is at the same time a thickening of the pleura.<sup>2</sup> The introduction of 200 to 300 c. c. of air (artificial pneumothorax), assists considerably in making a correct diagnosis. The complete separation of the lung from the costal pleura speaks for a lung tumor, with secondary atelectasis of the lung, while extensive adhesions (failure of the lung to collapse) speaks more for an interlobar empyema with pleural thickening. Cases showing marked



Fig. 5. Malignant (left) Broncho stenosis

fluid in the pleura should be aspirated, and an artificial pneumothorax performed. The roentgenogram will then reveal the underlying lung pathology.

Roentgenographic examination of the chest, particularly stereoroentgenograms, is a valuable adjunct in the diagnosis. In fact, a diagnosis of malignancy of the lung can be made before any physical findings are present. At times a sharply outlined tumor shadow can be seen, and occasionally multiple round shadows, which are much more frequent in metastatic cases.<sup>3</sup> If a bronchus is obliterated the position of the diaphragm on the affected side is very high and shows restricted mobility, and the mediastinum is pulled to the affected side during inspiration. Complete obstruction of the bronchus causes atelectasis. If the phrenic nerve is compressed, paradoxical movement of the diaphragm is ob-

served. Carcinomatous lymphangitis may give the typical picture of disseminated pulmonary tuberculosis.

Carcinoma of the lungs is comparatively recent in cancer mortality investigations. In 1914 a special census investigation returned 52,420 cancer deaths of all kinds, of which 371, or 0.7 per cent., were due to carcinoma of the lungs and pleura. In 1923 out of 86,754 deaths from cancer, 1,387, or 1.6 per cent., were attributed to carcinoma of the lungs and pleura. The male death rate for carcinoma of the lungs is 3.3 per cent. in Albany, N. Y., 3.8 per cent. in Boston, and 3.7 per cent. in Chicago.

#### CASE REPORTS

*Case I:* F. R. single, female, Jewish, aged 17 years, entered the medical service of Dr. M. Lewison of Mt. Sinai Hospital, July 15, 1924, complaining of severe pain in the left chest, of six months' duration. This pain was particularly pronounced at the angle of the scapula, usually came on at night, sometimes keeping the patient awake. She complained of an occasional hacking cough on arising, with no hemoptysis or expectoration, and an occasional pain in the right hip. She gave a history of influenza six months prior to her present complaint. The menstrual and family history revealed nothing of importance and her habits were good.

Physical examination showed a fairly well developed young female who did not appear to be acutely ill but was apparently suffering severe pain. Her temperature was 99.2°F., pulse 108 and respirations 24 on admittance. The essential findings in the chest were as follows: The anterior left chest was somewhat bulging and immobile. Tactile fremitus was diminished over the upper left half. Percussion revealed absolute dullness anteriorly above the third rib and posteriorly above the eighth. The breath sounds were diminished over the entire upper portion of the left chest, with no rales. The heart dullness was replaced by a tympanic note. There were no murmurs.

The abdomen was negative. There was some tenderness at times over the right hip. Repeated urinalyses were negative. Blood chemistry and the Wassermann reaction were negative. Repeated sputum analyses were negative for tubercle bacilli, parasites and malignant cells. The red blood cells were 4,770,000, white cells 8,500, hemoglobin 80 per cent. Repeated differential counts varied as follows: Polymorphonuclear leukocytes 55 to 69 per cent, small lymphocytes 20 to 33 per cent, large lymphocytes 5 to 8 per cent, transitionals 1 to 2 per cent, eosinophiles 2 to 7 per cent.

In view of the physical findings thoracentesis was instituted, but no fluid was obtained. The

needle, however, met with some resistance and produced a bloody fluid.

Roentgenological report by Dr. M. J. Kaplan was as follows: (Fig. 1) A large shadow occupying the left lung field from the apex down to the ninth rib posteriorly. The lower end can be definitely made out and has a scar-like appearance. The left diaphragm is practically immobile and higher than the right. Both the left apex and the mediastinum are obscure. The trachea is pushed to the right.

An artificial pneumothorax for diagnostic purposes was done, 650 c. c. of air being injected into the left pleural cavity (Fig. 2). The tumor mass was seen to be well defined and compressed, occupying the upper portion of the lung. The lung was separated from the pleura and air (roentgenographically) could be seen ascending the pleural cavity. No pleural adhesions were present.

*Diagnosis:* Tumor of a bronchus, evidently sarcoma.

Four months after admittance to the hospital definite evidence of metastases to the right hip bone and brain were found.

*Case 2:* M. L., Male, married, Jewish, aged 52 years, entered the medical service of Dr. I. Trace at Mt. Sinai Hospital, October 29, 1924, complaining of cough, pain in the right side, hemoptysis and shortness of breath. Cough had been present for twenty years, but had become aggravated in the last two months. The cough was productive in character and at times blood-streaked. The pain in the chest had been present for two months. There was nothing in the past or family history or in the habits that had any significance in this case.

Physical examination revealed a well nourished adult male who did not appear to be acutely ill. The chest findings showed flatness in the right upper lobe, increased vocal fremitus, bronchial breathing and rales. The urine, blood Wassermann reaction and blood chemistry were negative. No tubercle bacilli were found on repeated examinations of the sputum, and there were no cancer cells or parasites. The red blood cells numbered 5,200,000, white cells 8,600, hemoglobin 90 per cent. The differential count was normal.

Roentgen-ray Report. Roentgen examination by Dr. M. I. Kaplan (Fig. 3). On the right side of the chest from the clavicle down to the sixth rib there is a dense shadow regular in outline and irregular in density which merges with the cardiac shadow. The cardia is enlarged. The aortic shadow is also enlarged. Costophrenic angles are clear. Right cardiophrenic angles obliterated, mediastinal space clear above and below, but not in the middle.

Gastrointestinal and kidney roentgen examination negative. Thoracentesis of the chest revealed no fluid.

A pneumothorax was performed for diagnostic purposes (650 c. c. of air injected). This showed a compression of the lung and complete separation of the pleura from the lung tissue. Under roentgeno-

scopic examination the air could be seen ascending the pleural cavity (Fig. 4).

*Diagnosis.* Primary pulmonary malignancy.

*Case 3:* J. W., male, married, Jewish, aged 61 years, complained of cough, progressive dyspnea and a feeling of heaviness in the chest of six weeks' duration. His previous health had been excellent. At no time did he cough up blood. The essential physical findings were as follows: The patient was extremely dyspneic and wheezed considerably. The anterior portion of the left chest was more prominent than the right.

Littens phenomenon was absent on the left, as was tactile fremitus. There was dullness over the upper lobe to the fourth rib anteriorly and to the sixth rib in the midaxillary line. There was marked hyper-resonance below. The breath and voice sounds were absent. Many rales were heard over the right chest. There was no adenopathy. The abdomen was negative. The urine, blood Wassermann reaction and blood chemistry were negative.

Repeated examinations of the sputum for tubercle bacilli were negative. There was no rise in temperature. The blood showed a secondary anemia. Roentgenological examination revealed a large mass in the left lung, about the size of an apple (Fig. 5).

*Diagnosis:* Malignant left sided bronchostenosis.

#### CONCLUSIONS

1. A history of progressive loss of weight, pain in the chest, cough, bloody expectoration and absence of fever in a patient past forty, who has had no history of pulmonary tuberculosis, is very suspicious of malignancy of the lung.

2. All patients with carcinoma of the breast should have a thorough examination of the chest for evidence of lung metastases before a radical amputation of the breast is performed.

3. Unilateral bronchostenosis indicates carcinoma of a bronchus.

4. Rapidly recurring pleural effusion, even if not hemorrhagic, is suspicious of malignancy.

5. Lung tumors at times cause an elevation of temperature.

6. Bloody pleural fluid suggests malignancy.

7. The various diagnostic procedures such as 1. examination of the sputum for tumor cells; 2. bronchoscopic and diagnostic pneumothorax; 3. roentgenogram (stereo-) and, 4. thoracoscopic examination, should be carried out.

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## A CLINICAL PATHOLOGICAL STUDY OF PULMONARY DISEASES\*

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The study of a case of pulmonary disease should always begin with the taking of a careful history of the patient's illness. Especially important are the family history with reference to tuberculosis, the occupation of the patient, the duration of his symptoms, and the history of previous pulmonary disease. The recording of the history should be followed by a thorough and systematic physical examination of the chest. The method of such an examination is described in many text-books on physical diagnosis and will not be discussed by me at this time. I wish only to emphasize the importance of keeping an accurate record of all the physical findings.

On completion of the physical examination a microscopic examination of the sputum, when any is obtainable, should always be made for tubercle bacilli. The presence of bacilli makes the diagnosis of tuberculosis certain; the absence of bacilli in a case with physical findings suggestive of the disease should arouse the suspicion of the existence of some other chronic ailment such as bronchus carcinoma, bronchiectases, syphilis, actinomycosis, abscess, blastomycosis, lymphogranuloma, metastases, etc. When a pleural exudate is present aspiration is advisable, especially when large amounts of fluid are found and conceal the underlying pulmonary changes. Only after withdrawal of the fluid is it possible in such cases to make a diagnosis even with the x-ray. Chemical and microscopic as well as bacteriologic study of the fluid may aid in making a correct diagnosis. A Wassermann test should be made in all doubtful cases of pulmonary disease.

Only after the above mentioned studies have been conducted should the x-ray examination be made. Too often the patient is sent to a roentgen technician who has little or no knowledge of pathology or clinical medicine, before a careful physical examination has been made. The result is that an incorrect diagnosis may be reported and the clinician misled. There are chest diseases which cannot be diagnosed by x-ray examination alone, and this is especially true of

certain forms of incipient tuberculosis. Several years of study in European clinics, where post-mortem control was possible in all fatal cases, have convinced me of the danger of placing too much confidence in x-ray findings alone. The roentgenologist must cooperate with the clinician to obtain the highest possible percentage of correct diagnosis. And he is the best roentgenologist who has the broadest knowledge of medicine, especially of pathology.

After a careful history has been obtained, and the physical examination and x-ray study are completed, there still remain some special methods of investigation in certain difficult cases. These are pneumothorax, bronchography and bronchoscopy, and thoracoscopy (Jacobaeus). An artificial pneumothorax may make possible the diagnosis of pleural metastases, tumor of the chest wall, etc. The great value of bronchography, with the use of iodized oil injection into the bronchial tree, is now generally recognized in the diagnosis of bronchus carcinoma, syphilis of the trachea, bronchiectases, etc. Thoracoscopy has a very limited usefulness in the diagnosis of pulmonary disease.

The study of a large number of cases of pulmonary and cardiac disease at the Wenckebach Clinic of the University of Vienna during a period of four years has been of great value to me chiefly because autopsies were performed on all fatal cases. The close cooperation of the internist, roentgenologist and pathologist creates a high standard of efficiency in diagnosis, and permits the internist and roentgenologist to profit by their mistakes as well as to establish new clinical pictures from time to time.

### TUBERCULOSIS

The mode of infection in tuberculosis is now well known, thanks to the work of Ghon and others. It begins in early life as an inhalation infection with the development of an area of tuberculous broncho-pneumonia, the so-called *primary focus*. The infection may occur immediately after birth of the child. It is present in about 60% of children at the age of 10 years, as shown by the Pirquet tuberculin reaction. Associated with the primary focus, which is most often found at the base of the upper or lower lobes, there is always an involvement of the tracheo-bronchial lymph nodes which drain the area. These nodes become enlarged and often

\*Address delivered before the Jackson Park Branch of the Chicago Medical Society, February 17, 1927. It was illustrated with numerous lantern slides.

caseate. The primary focus and the associated tuberculous lymph nodes at the hilum are known as the *primary complex*. The development of the primary complex can be followed very well by serial x-ray pictures taken over a period of months or years. Gradually the focus of broncho-pneumonia with its surrounding area of inflammatory edema or gelatinous pneumonia gets smaller and smaller until only a small calcified or ossified nodule or area remains to mark the site of the primary infection. Also the affected lymph nodes slowly calcify and the process stops or heals. In some cases, however, the hilum glands continue to grow in size and undergo caseation, or the primary focus spreads to involve a large area with necrosis and cavity formation. When the primary focus lies near the diaphragm it may produce a diaphragmatic pleurisy with symptoms resembling an appendicitis, or gall bladder disease. Contact with the pericardium may lead to a cardiac neurosis or a pericarditis. The enlarged glands in the mediastinum, so common in children, lead to spinalgia, cough, Kramer area of dullness, anisochoria, etc. Therefore, in children we should pay most attention to these symptoms. Involvement of the apex is very rare in this type of tuberculosis, as the primary focus very rarely occurs there.

The second form of tuberculosis to which I wish to call attention is that of the *proliferating primary complex*. In this type there is often a large primary focus due to a massive infection with tubercle bacilli, with marked caseation and enlargement of the lymph nodes. The bacilli may then reach the blood stream producing a miliary tuberculosis, a tuberculous meningitis, or various forms of surgical tuberculosis. Or the primary focus may penetrate a bronchus and then lead to bronchogenic spread of the disease, a phthisis caseosa with or without cavity formation. Hemoptysis or spontaneous pneumothorax may be complications of this type.

The third form of tuberculosis which I wish to discuss is that due to *hematogenous dissemination*. Here we have a number of sub-types depending upon the extent of the dissemination through the blood stream.

(a) *Malignant proliferation* is due to the discharge of numerous bacilli into the circulation with the development of a generalized miliary tuberculosis. A caseous gland or focus may

invade the thoracic duct, pulmonary vein, pulmonary artery, jugular vein, or even the aorta itself.

(b) *Virulent proliferation* is the result of the formation of many tubercles but in a more resistant individual. The tubercles are of the epithelioid type and usually not fatal. This form leads to the so-called *typho-tuberculosis* with the enlarged spleen, surgical tuberculosis of the bones, kidneys, brain, adrenals, etc. Or, a *polyserositis* may mark its onset, due to the development of subpleural tubercles in the lungs. The pleura, pericardium, peritoneum, meninges, joints may all become affected. A third variety of virulent proliferation is the *diffuse fibroid tuberculosis* of the lungs. Many small fibrous or calcified spots appear in both lungs, especially in the upper lobes. Emphysema may follow. Or there may be hemoptysis from erosion of a vessel. This type is often associated with bone tuberculosis, iridocyclitis, and a hard round spleen. The fourth variety is the *dense fibroid or ulcero-fibrous tuberculosis*. This usually affects both apices producing a bilateral induration with narrowing of the apical fields. Cavities may or may not develop.

(c) *Bland proliferation* is the type in which only a small number of *discrete miliary tubercles* appear in the apical regions. These may calcify leaving several small spots in both apices. A non-specific inflammation, without typical tubercle formation, can occur in this mild type of the disease. Here the tuberculo-toxic diseases, such as Poncet's form of arthritis and the so-called rheumatoid eye disease belong. Or, there may be recurrent attacks of pleurisy, with interlobar pleurisy scars.

The fourth and last form which I shall discuss is the *bronchogenic phthisis* seen most often in adults. It is characterized by acute attacks, with high fever and lassitude, lasting from 5 to 20 days and diagnosed often as "grippe." These are cases of massive reinfection with bronchogenic spread, the so-called "galloping" consumption.

We find rates of various kinds in different areas of the lung. The process has a lobar distribution, most often at the bases of the upper lobes, and is often bilateral. The sputum is always positive. A pneumothorax in cases with one-sided involvement may stay the process. This type is usually fatal within five to ten years.



This type is an absolute contraindication against pregnancy. The pregnant woman may feel better toward the end of pregnancy with the lung compressed and put partly at rest by the high position of the diaphragm. But after delivery, when the lungs expand, extension of the disease by aspiration is very often followed by a fatal outcome.

#### BRONCHUS CARCINOMA

Bronchus carcinoma can no longer be considered a rare disease. In large European clinics, where autopsies are performed on all patients dying in the clinic, this disease has been recognized for years. Today, with the aid of the x-ray and bronchography and bronchoscopy, the diagnosis of a bronchus carcinoma offers no great difficulty in a high percentage of cases. It seems that this disease has increased throughout the civilized world in the past ten years. This increase is not alone due to better diagnosis, as the pathological institutes in which this condition has been recognized for years also register a marked increase in the number of cases. The fact that the disease usually begins with a metaplasia of the columnar epithelium to a squamous type speaks for the importance of chronic irritation as a predisposing cause. The importance of bronchus carcinoma can be realized from the statistics of Briese who found 1289 cases of carcinoma in 12,971 autopsies. Of these carcinomas 60 were bronchus carcinoma, or 4.5%.

When a patient past middle life, who never had pulmonary disease, develops a dry cough, and expectorates a little blood-tinged sputum free from tubercle bacilli one should think of the possibility of a bronchial cancer. The patient may for months present no other symptoms except perhaps a slight temperature and some loss in weight. In other cases hemoptysis, or cardiac symptoms with marked dyspnea, enlargement of the mediastinal glands, venous congestion of one side of the neck, face, or arms, with edema may develop.

The diagnosis of bronchus carcinoma of the upper lobe is not so difficult by physical examination, but in the other lobes may be almost impossible without the aid of the x-ray and bronchography or bronchoscopy. Very often the condition is diagnosed as an indurative pneumonia or a fibroid tuberculosis. Any chronic pneumonia without a leukocytosis, without tubercle bacilli in the sputum, and with a negative Was-

sermann should arouse the suspicion of a bronchus carcinoma. When in a suspected pulmonary tuberculosis no bacilli are found one should always think of the following: bronchus carcinoma, bronchiectases, syphilis, lymphogranuloma, or sarcoma.

I have classified the forms of bronchus carcinoma into five types, 1. the *lobar form*, usually looked upon as a chronic indurative pneumonia. In the lower lobe the diagnosis is often very difficult; 2. the *pleural form*, characterized by an extensive hemorrhagic carcinomatous pleurisy due to involvement of the pleura; 3. the *bronchial form*, with bronchiectases or bronchus stenosis and atelectasis; 4. the *mediastinal form* in which the metastases in the mediastinal glands, which are always present in bronchus carcinoma, dominate the clinical picture. This type may be very difficult to differentiate from lymphogranuloma, lymphosarcoma, hyperplastic tuberculosis, aneurysm of the aorta, etc. The primary tumor may be very small but the mediastinal glands of tremendous size; 5. the *rheumatoid form* in which the bone metastases may give the first symptoms of an occult bronchus carcinoma. Here I wish also to include the two cases of toxic hyperplastic periostitis which I have seen associated with bronchus carcinoma.

Time will not permit me to discuss the symptoms in detail. But I wish to call attention to one complication of this disease which I have seen in five cases, and that is brain metastases producing the symptoms of a brain tumor. The osseous system should always be carefully examined for metastases. I have also seen three cases with metastases in the adrenals. They may occur in any organ of the body.

#### SARCOMA OF THE LUNG

Primary sarcoma of the lung is a very rare disease, and cannot be diagnosed with certainty in vivo. I have seen three such cases. The first was characterized by a round shadow in the right upper lobe, which had no sharp boundary but gradually faded out into the lung tissue. The mass was separated for a considerable distance from the right hilum, in contrast to the bronchus carcinoma shadow which usually involves the hilum region. A second case produced a large, intense, sharply outlined shadow involving most of the left upper lobe, with paralysis of the left diaphragm. The third case resembled closely a pneumonic process of the right

upper lobe, with enlargement of the right hilum. Only at autopsy can these cases be differentiated with certainty from other forms of malignant tumor.

#### HODGKIN'S DISEASE

I have seen in six cases of this disease large shadows in the lung fields, more or less sharply outlined, due to the development of areas of lymphogranuloma in the lung itself. These may so closely resemble metastases that one of our cases was diagnosed as multiple sarcoma metastases. The autopsy revealed a lymphogranuloma primary in the lungs. Also in cases of generalized lymphogranuloma lung involvement is not at all rare. I saw in the Wenckebach clinic three cases of mediastinal lymphogranuloma in one family, all of the patients males. The cases are described in my publication in the *American Journal of the Medical Sciences* for May, 1926.

The diagnosis of lymphogranuloma can be made with certainty only by histologic examination of a lymph node or the affected tissue. There are no specific blood changes. This disease is often erroneously classed with the blastomas. It is undoubtedly an infectious granuloma, as proven by the case of Dr. Priesel which I saw in Vienna of a mother with lymphogranuloma who gave birth to a child suffering from the disease. The infection of the foetus was no doubt by way of the placenta.

The cardinal symptoms of Hodgkin's disease are 1. glandular enlargement, 2. recurring attacks of fever, 3. polynuclear neutrophile leukocytosis with eosinophilia, 4. pruritus, 5. toxic symptoms, 6. enlargement of liver and spleen.

#### SYPHILIS OF THE LUNG

The diagnosis of syphilis of the lung is very difficult to make, and many cases so considered are probably not syphilis. The fact that a patient has a positive Wassermann does not yet prove that the lung shadow or cavity is a syphilitic lesion, any more than it proves that the gastric ulcer of such a patient is luetic. We must learn to distinguish between specific organic disease and non-specific disease in a syphilitic patient. I have seen two cases of syphilitic gummas of the lung, neither of which was diagnosed during life.

We may classify syphilitic disease of the lung into 1. gummatous, 2. gummatous-cavernous, 3. interstitial with bronchiectases 4. cirrhotic form with scar formation in the bronchi and pleura, and 5. the very rare pneumonic form.

#### ECHINOCOCCUS CYST

Echinococcus cyst is rather rare in our country, but more frequent in Europe and quite common in certain countries of South America. I have seen ten cases of this disease. The finding of a spherical dulness in the axillary region should cause one to suspect echinococcus cyst. The diagnosis is usually very easy with the x-ray. A sharply outlined, spherical homogeneous shadow is characteristic. Calcification may occur in the wall of the cyst. Perforation of the cyst into bronchus may be accompanied by a hemoptysis or the expectoration of a large amount of cyst contents with the membrane and hooklets. The cysts vary greatly in size, and may become large enough to occupy an entire lobe. Most of the cases I have seen were in the right lung. In one case there were also cysts in the liver and retroperitoneal tissue, which were visible in x-ray photographs due to calcification of the wall.

#### BRONCHIECTASES

In patients with bronchiectases the characteristic history of the expectoration of mouthfuls of sputum, which forms three layers on settling, the odor of the sputum, the rales, and dulness in the phrenico-cardiac triangles enable one to suspect this condition. Fluoroscopic examination often reveals the dilated bronchi with their horizontal fluid levels. The injection of iodized oil makes the diagnosis certain, but I have not found this necessary in many cases. A careful fluoroscopic examination, with rotation of the patient, will make it possible to see the bronchiectases. The chief causes of bronchiectases are chronic bronchitis, pneumonia with induration, bronchial cancer, pleural scars and tuberculosis.

#### METASTATIC LUNG TUMORS

Any carcinoma or sarcoma in the body may produce pulmonary metastases, but there are certain malignant tumors which are characterized by their great tendency to produce lung metastases. These are all the highly malignant sarcomas, hypernephroma, carcinoma of the breast, chorio-epithelioma, ovarian carcinoma, malig-



nant teratomas, etc. I have seen lung metastases in two cases of larynx carcinoma, and in four cases of stomach cancer, also in two cases of pancreas carcinoma.

Small metastases may produce no clinical symptoms whatever. Here the x-ray is the only means of diagnosis. It must be remembered, however, that tuberculosis and also lymphogranuloma may produce solitary sharply outlined shadows in the lung resembling tumor metastases or benign tumors.

Numerous metastases may produce the clinical picture of a broncho-pneumonia. I have seen several cases of miliary carcinosis mistaken roentgenologically for miliary tuberculosis. Two cases of melanosarcoma with multiple minute metastases in the lungs were so diagnosed. Other sarcomas, also chorio-epithelioma may produce a similar picture. Extension to the pleura with hemorrhagic exudation may cause a darkening of an entire lung field. This I have already described as frequent in bronchus carcinoma, and it also occurs in pleura endothelioma (carcinoma).

I wish finally to call attention to the fact that lung or pleura metastases may develop years after operation for sarcoma or carcinoma, at a time when the patient is considered cured. I saw a case of melanosarcoma of the eye with pulmonary metastases 12 years after removal of the eye. I saw another case of a woman who died of lung and pleura metastases six years after operation for carcinoma of the breast.

#### LUNG ABSCESS

Abscess of the lung may be 1. broncho-pneumonic, 2. embolic, 3. metastatic, 4. bronchiectatic. The broncho-pneumonic form is seen frequently in influenza, aspiration broncho-pneumonia with mixed infection with spirochetes, etc. The only difference between such a lung abscess and gangrene is in the bacterial flora. In the latter putrefactive bacteria as well as pyogenic forms are present.

The embolic form of lung abscess usually follows a septic thrombosis, just as does pyemia or septicemia in general. It is seen after operations when a septic thrombus forms in a vein. Emboli of bacteria are then carried to the lung where they set up an abscess formation.

A metastatic tumor form of lung abscess oc-

curs when tumor metastases develop and these contain bacteria which cause them to break down with abscess formation. I have seen two cases of larynx carcinoma with multiple lung metastases, some of which formed abscesses in the centre with a horizontal fluid level. Either the bacteria were brought to the lung with the tumor emboli, or the tumor growths in the lung were invaded by bacteria from the lung or blood stream.

Bronchiectatic lung abscess is not uncommon and is also due to the formation of areas of broncho-pneumonia about the infected bronchi with subsequent abscess formation.

I wish to call attention to still another form of lung abscess which I have observed in patients with cardiac decompensation. Such patients with passive congestion of the lungs frequently develop hemorrhagic lung infarcts. In the absence of an endocarditis these are due to the breaking loose of fragments of aseptic thrombi formed in the right ventricle or in the auricular appendage or in the veins of the extremities. The aseptic infarct may become infected with bacteria present in the lung and undergo supuration with abscess formation. The patient may then succumb to the lung abscess or empyema if the cardiac condition improves.

#### MEDIASTINAL TUMORS

The subject of mediastinal tumors, in the broad sense of the term, is such a large one that I shall reserve it for discussion at another time. I wish here only to enumerate the most important causes of mediastinal tumor formation. They are 1. tuberculosis of the mediastinal lymph nodes especially in the primary complex in children, 2. acute lymphadenitis in acute infectious diseases, 3. syphilitic gummas, 4. lymphogranuloma, 5. lymphosarcoma, 6. teratomas (dermoids), 7. aortic aneurysm, 8. substernal thyroid, 9. esophagus carcinoma, 10. dilated esophagus due to cardiaspasm, 11. cold abscess due to Pott's disease, 12. persistent thymus, 13. sympatheticoblastoma, etc. The possibility of a bronchus carcinoma with mediastinal tumor due to metastases in the lymph nodes should always be kept in mind. I have already discussed this under the subject of bronchus carcinoma.

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## MY IMPRESSIONS OF THE TUBERCULOSIS SITUATION AS GLEANED FROM MY RECENT VISITS ABROAD\*

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Theorizing on the prognosis of tuberculosis in the sense of its ultimate eradication from the human race, has long been an obsession with me, and probably with every one who has to do with this disease. In the topic assigned to me this evening, I appreciated the opportunity of bringing this subject to your consideration. In regard to my recent trip to Europe, only such observations and views assimilated, which have a direct bearing on this phase of tuberculosis, will be embodied in this paper. We shall not concern ourselves with statistics which are so readily available from innumerable sources. Nor shall we consider the work of individual men, hospital management, diagnostic technique of divers varieties, or similar details. Rather it shall be my purpose to indulge in a literary debauch, a pot-pourri of theories, axioms and categories.

Any consideration of the present status of human tuberculosis must concern itself primarily with the causative factor or factors, and their management. In every country and section of the world, where tuberculosis has been accepted as a specialty and thereby given special study, the theory of childhood infection has been accredited. The theory of childhood infection insists that pulmonary tuberculosis has its inception in infancy and childhood as a glandular infection, and that the adult manifestation is but a metastatic expression of an infection incurred in the earliest years of life. If there be any difference of opinion amongst men on this point, it is merely in the matter of percentages. It was the Ghone of Vienna who first demonstrated and expanded upon the primary complex, and proved its frequency in children. His successor, Erdheim, the Grand Old Man of to-day, is convinced that all pulmonary tuberculosis is due to the human tubercle bacillus, and is an inhalatory affair. Staunch in this belief, he boldly brushes aside the bovine and other hybrid forms, which we for example, are wont to accuse of at

least a minor part in this disease. Erdheim insists the mechanism of tuberculous infection is as follows: The human bacillus is inhaled and passes through the bronchus into an alveolus and lodges there. Tubercle bacilli multiply, and a tubercle is formed. This tubercle caseates and infects the regional lymph nodes, thereby completing the so-called primary complex of Ghone. The lung tubercle very shortly and almost always calcifies, but the lymph gland contains the encapsulated tubercle bacilli, and keeps them viable for years. At puberty, metastases take place from either the gland or the primary tubercle (usually at the base of the lung) to the apex. Erdheim demonstrates beautifully this primary complex in one juvenile subject after another, and the metastatic invasion of the apex in his subjects at puberty. It is of interest to note his dogmatic statement that 95% of all humans autopsied at puberty, show an apical insult.

If then we accept the premise that all humans or at least a vast majority of them, undergo a juvenile infection through direct contact, and develop a primary complex, we are confronted with the profoundly interesting problem, what factor or factors determine the degree of severity of reaction on the part of the human host to the invading organism? How account for the fact that 75% of those affected, display no recognizable evidence of invasion? And why do from 10 to 15% take on and successfully weather a mild, short-lived, though very evident general infection? And finally, what element or elements condemn the remaining 5% to a severe course? To facetiously proffer the vague and indefinable explanation "Varying Immunity," is I fear begging the question.

The subject of mal-nutrition in the earliest months and years of life, has always appealed to me as a sound, logical factor in determining the reaction of an host to this specific invasion. We are all impressed with the fact that an euphoria in adult life, based on a sound nutritional basis is a reliable buffer against disease. It not alone allows an individual to expose himself successfully to multiple and varied infections, but even when only partially protective and such an individual succumbs, the course of his disease is short-lived. Quite logically it seems to me, the question of proper quality and quantity of food may be a real deciding factor in the reaction

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of the young towards their first big test, their tuberculous invasion. In this country, where even the most indigent with few scattered exceptions, are able to provide their young with at least the bare necessities of life, a careful observation to bear out this theory is difficult. Europe, however, during the recent prolonged War, offered an ideal setting (ideal from a research standpoint) for such a study. During the last two years of that conflict (1917 and 1918) and the succeeding two years (1919 and 1920), several countries, particularly Germany and Austria, starved. They managed somehow to feed their adult population, but with their infants and children, they failed. Men and women could and did exist on husks, and on dried second growth vegetables of no caloric value. They lost enormously in bodily weight and vigor, and quite naturally sent the mortality rate of many diseases to a higher level. It was in children, however, that this prolonged starvation, produced its most marked effect. Of particular interest to us is the influence on tuberculosis. The food elements which were either entirely absent or at least markedly deficient, were milk and butter. For the former nutritional mainstay there exists of course no substitute, and for the latter, none worthy of mention. Nor could the vitamins A, B, and D, be supplied in sufficient quantity. The result was both startling and deplorable, particularly as regards the tuberculous infection in juveniles. A wide-spread marasmus in young infants soon gave way to a picture of ravaging tuberculosis. If the vast percentage of all juveniles are tuberculously infected at all times, this situation possibly was unaffected, however two other observations were plainly evident. First, a tremendous increase in the numbers of severe glandular infections which ran a long, stubborn course, and terminated fatally in many instances was noted. Second, pulmonary tuberculosis, or the failure of Ghone's tubercle to become calcified, and a resultant miliary tuberculosis was common. So that it would seem that not alone an extreme nutritional deficiency such as this, but even a minor grade such as is frequently encountered in our country, largely due to ignorance on the part of parents, is a real factor in propagating tuberculosis. To theorize still further as follows: Fully seventy-five per cent of children tuberculously infected, in no wise supported except by

a sufficient nutrition, run the gamut of invasion so successfully, that they present little or no outward evidence of disease, at that period, nor at any later date. It would seem logical then to conclude that coincident with their primary infection, they develop and foster an immunity towards metastases later in life, more especially at puberty. They constitute that big group which at puberty show a definite healed apical invasion without having displayed any clinical evidence of the disease. Is it not possible then that a severe primary infection, irrespective of the cause of the severity, per se argues for a diminished or lack of immunity on the part of the host not only against its initial invasion, but against a metastasis at puberty as well?

Again this theory seems to be substantiated by the following intensely interesting observation in Europe: Those children who ten or twelve years ago sustained an unusually severe primary infection, presumably due to malnutrition, at puberty provide a vast increase in the percentage of adolescent active pulmonary tuberculosis. The question therefore of nutrition in infancy and childhood, as it affects immunity towards the initial invasion and subsequent metastases, is pertinent.

There are few unanswered questions in the field of tuberculosis more interesting than that which inquires, "What agent or agents are responsible for the relighting of an apical tuberculosis at puberty?" It is true there are predisposing agents, some theoretical, others proven beyond doubt. However, they do not to my satisfaction explain the mechanism of tuberculosis. Of one hundred individuals all having had a glandular tuberculous invasion in childhood, and all subjected to the same predisposing or activating factors, only a minor percentage relight themselves. Why? "Individual resistance or immunity," is the ambiguous answer. Whence does this resistance arise? From exogenous causes? Exercise, diet, hygienic surroundings? Or is there an endogenous cause?

The Germans and Austrians have recently looked to constitutional pathology if not for the answer, at least for a theory. They have coined the term "Anlage," which is a bit hard to define. They adopt a given normal, obtained by comparison of large groups. This normal must cover the individual completely. Not only his physical aspects, size, stature, weight, height,

color of hair, eyes, etc., but his metaphysical, his mental, psychological, temperamental reactions, etc. After adopting a normal, an individual can be rather accurately charted. It will be found that variations of all descriptions appear, some to the right of the line, a "Superiority Group," the majority of diversions, however, to the left of the line, an "Inferiority Group." Now, while it is unquestionably true that many of these divergences from the normal are of exogenous origin, a definite and appreciable group are of endogenous or constitutional origin. Those of constitutional or endogenous origin, form an individual's "Anlage." They are present in the fertilized ovum, the direct heritage from parentage, sometimes maternal, at others paternal. Should maternal and paternal heritages clash, and with equal force, that individual's "Anlage" would be blotted out, and not transmitted as such.

That "Anlages" of all descriptions, physical, mental, etc., exist, is pretty certain. For example, nobody will deny the transmission of red hair to an offspring. Nor can any one deny that the red-haired group in addition to inheriting an abnormal pigment, have also inherited a marked "Inferiority Complex" or "Anlage," because of that pigment. Red haired individuals as a group show a marked spur from the normal, to the left of the line, physically, mentally, etc. "Anlages" towards the intestinal tract are numerous, such individuals for example, not only show a marked inclination towards colitis, but re-act upon their intestinal tract to every non-specific stimulus. An individual for example, with an intestinal "Anlage," who develops a hyper-thyroidism, will show in addition to an adenoma, an irritable bowel. And so without question, there exists an "Anlage" for the respiratory tract. Such individuals, when exposed to cold, wet, fatigue, toxins such as alcohol, etc., will develop a bronchitis, a pneumonia, a pulmonary tuberculosis. It is an interesting even though a bit fantastic theory which may as well be added to the long list already extant.

Now that I am almost through, I shall take up the title of my subject, "My Impressions of the Tuberculosis Situation." My first impression in the retrospect is that Europe, like

America, is fighting the same fight, using practically the same weapons, and that we all are arriving at our objective. Even the pessimist must grant that the tuberculosis situation today is hopeful. It is only during the past decade that we have come to realize the important role the primary infection plays in the entire story of tuberculosis, and we are not fully appreciative even yet. To understand that the primary complex is the precursor of adult pulmonary tuberculosis, is not enough. To realize that the very organism which does its destructive work in the adult apex, has lain dormant, encapsulated in the individual's lymph gland since childhood, is startling, but also is not comprehensive enough. Unless we see in every child a possible harbinger of the tubercle bacillus, a potential consumptive, and with that thought in mind, guard him and observe him through the early years, well beyond puberty, we have not understood. The entire problem of tuberculosis begins with earliest infancy—yes, precedes it. It begins with the discouraging of frank consumptives to marry. The removal of infants from contacts, a fairly recent objective, is a tremendous step forward. The careful management of nutrition in infants and young children is of paramount importance, and has been brought to a high plane in the past few years. The Chicago Tuberculosis Society advocates "An Annual Physical Examination." We owe our children one semi-annually. The open-air schools have been an agent whose power and force we cannot evaluate. In a word, by elevating the health of our juveniles and building robust bodies, we annihilate puberty tuberculosis. The entire question of tuberculosis resolves itself about prophylaxis, not only against the primary infection which seems to hold the center of the stage today, but against the metastatic process at puberty as well.

Let us take up very briefly the subject of puberty tuberculosis. We have proof enough to warrant the belief that at that period of life which marks the step from childhood into young adolescent life, roughly from the age of fifteen to twenty, the second act in this drama takes place. A quiescent and in most instances a completely healed basal infection is awakened, and in possibly fifty per cent. of all of us, an apical



affair is begun. Fortunately in most of us, just as in our primary infection, this second invasion is kept within bounds. So well controlled in fact, that we handle it without any outward manifestations. The tubercle bacillus migrates from base to apex and produces its typical pathology as evidenced at autopsy, a healed tubercle, yet, clinically, there has been little or no evidence. The minority who break down with an active pulmonary tuberculosis, again hurl at us the challenge, "Why"? And our answer just as in the primary invasion is theoretical, ambiguous, indefinite, "Lack of Immunity." Certainly "Anlage" is not in itself satisfying.

There are certain predisposing and activating agents which stand out, and should focus our especial attention. In the first place, in this most critical age of a patient, it is desirable that his general health be maintained at its highest peak. Body weight, nutritional balance, and vital capacity should be kept surcharged to meet the exacting demand. Any influence tending to vitiate them, is a menace. Protracted loss of sleep, plus the undermining influence of insufficient fresh air and sunshine, is a real destructive force. The unhealthy reaction of our adolescent youth to the unpopular legislation as embodied in the 18th amendment, is a serious activating agent. Surely the widespread use and abuse of alcohol by the young is a menace of the last decade, and is responsible for the origin of an appreciable percentage of reactivation. I am confident it is a greater menace than venereal disease and excessive venery. Its influence is more widespread and comprehensive and withal more devastating.

Of the various diseases, infectious and otherwise, which deserve a prominent place as activating factors, I shall say very little. However, I call your attention to the fact that medical texts, even the more recent, error in my estimation in the importance placed on several of them. It would be difficult to find a text in which measles is not singled out and given considerable prominence as an activating force. That this disease plays a role in juvenile tuberculosis, I may grudgingly grant, but as an reactivating agent in adolescent tuberculosis, I cannot admit.

In 1918 it was my good fortune to have the opportunity of doing a bit of work in this respect. While in the service of the U. S. Army,

and incidentally working under the direction of Dr. Clarence Wheaton, I was enabled to observe closely 596 cases of measles in soldiers. These men were unusually closely checked. They were all subjected to a chest examination two weeks prior to their measles infection, again two weeks after convalescence, and finally six weeks later. Out of this very appreciable series of almost six hundred cases, only one showed evidence of re-activation directly attributable to measles.

In contra-distinction to measles, I am convinced influenza is very much underestimated as regards its importance as a predisposing or activating agent. In many texts it is given only a passing mention. By most men, even those like ourselves who have considerable to do with tuberculosis, it is taken too lightly. I was able in 1919 to study thirty cases of quiescent and healed pulmonary tuberculosis over a protracted period. None of these individuals prior to their subsequent influenza infection, showed any signs of activity on repeated examinations. Following influenza, thirteen or approximately forty per cent. of them became re-activated. I believe it in order, and I make it a point to re-examine every influenza patient three months and six months after their infection. There are other diseases which I should like to mention, but time will not permit.

In conclusion, I wish to say, that I appreciate fully that this paper has been what I threatened it would be, a litany of questions devoid possibly of even a single dogmatic fact. Europe, even as America, is fighting a valiant fight against tuberculosis, and is making tremendous headway. It is not the dream of a visionary to anticipate its ultimate eradication. To arrive at this millennium, however, I should consider the following as essential:

1. Prohibition of the frankly tuberculosis to marry.

2. Removal of infants and children from contacts as early and thoroughly as possible.

3. Elevation and maintenance of general bodily vigor and vital capacity, particularly in childhood and at puberty.

4. The institution of a rigorous prophylactic campaign against puberty tuberculosis, that is, an intensive inquiry as to the agent or agents responsible for the re-lighting of an apical focus.

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SYMPOSIUM ON THE COLON—MEDICAL  
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CHICAGO.

Not infrequently a patient is operated upon for gall bladder disease or for chronic appendicitis and the symptoms continue after the laparotomy and this often in spite of the fact that a pathological gall bladder or a diseased appendix has been removed. From this we can assume that there is something else behind the surgical picture; this is often perhaps the colon.

I. Boas and others believe that at least 30% of patients operated on for chronic appendicitis have the same symptoms afterwards as before.

During the current year the members of this Society have had the pleasure of listening to two excellent papers on diseases of the colon, the one dealing with non-ulcerative and the other with ulcerative colitis. It would seem wise therefore, in this brief presentation to confine the remarks not to any one particular disease, but rather touch upon the high points of several of them.

In non-ulcerative conditions of the large bowel, we have a constantly varying clinical picture starting at the one end with simple constipation (or perhaps merely stagnation in spite of the daily bowel movement) and at the other end a marked spasm of part or all of the colon with or without a secretion of an abnormal amount of mucus. There seems to be no sharp line between the various stages of the clinical picture. Nervous symptoms are apt to come in or even to dominate the syndrome. The manifestations of the nervous system may be due in part to toxemia although we must remember that some of the most intense cases of constipation, suffer from no appreciable intoxication. On the other hand, many of these patients do complain of unmistakable symptoms of poisoning, such as burning in the eye-balls, general depression and perhaps headaches. I have in mind one patient in particular who has a stool essentially gram negative, with some mucus. Occasionally she will suffer exacerbations with slight fever and some looseness in the bowel along with a feeling of depression and other evidences of intoxication. Before listening to this you will have heard a paper concerning the bacteriology of colon trouble and it would be out of place to go into

this subject to any great extent, but the writer wishes merely to bring out one or two points.

The majority of my patients are suffering from gastro-intestinal symptoms; and examination of the stools of these is therefore made as routine. This includes a gram stain and frequently a culture on milk for the gas bacillus. When the colon is normal we usually find the gram negative and the gram positive flora about equally divided. When the patient has no symptoms referable to the colon, the type of flora is put on record and then, even though it be abnormal, disregarded. There are a certain number of patients with evidence of distress including perhaps toxemia with the stools showing largely a gram negative condition and later when improvement occurs, we find fewer of the gram negative and more of the gram positive. In the patient quoted above, we have been able to raise her gram positive flora up to about 25 to 30% and going hand in hand with this bacteriological change is improvement in the symptoms. *Vice versa* with a change of the bacteria to the negative side, there is more evidence of toxemia as well as evidence of distress in a mechanical way.

The writer cannot boast of having been able to change the colonic flora to so great an extent as has been reported by some writers. The usual methods have been employed; that is, acidophilus milk of various brands, feeding of various sugars, as well as administering the chocolate-coated culture cubes furnished by a well known pharmaceutical firm. Strange as it may seem, some patients feel much better on this latter method of implantation than on any other. It should be added that the writer never employed direct implantation *per rectum*.

Kendall is quite convinced that the gas bacillus of Welch often has pathogenic significance. Individuals harboring this parasite are said to suffer from abdominal distension and perhaps some evidence of toxemia. There seems to be no question that this organism may at times produce symptoms which are relieved by instituting a low carbohydrate menu, as suggested by Kendall. One difficulty in determining the pathogenicity of the bacterium is that it is part of the normal intestinal flora; therefore even though they are found on culture this does not prove that they are causing trouble.

There is no essential difference between the treatment of spastic constipation and that of the



ordinary atonic variety. The aim in all these conditions is to get away from all cathartics and to have regular bowel movements without the aid of irritants.

The diet is probably of greatest importance. Many individuals tend to constipation because the diet has not been of the proper type. Although our aim is to furnish a coarse diet including the vegetables with much residue, coarse grains, etc., many patients do not tolerate this regime at the onset.

It may be necessary, in case the colon is quite spastic, because of irritating cathartics or other reasons, to have him first take a more or less bland diet and it may even be necessary to go to the extreme of furnishing a menu suitable to cases of diarrhea. As is so well known, the stool of constipation is scanty and the problem is to make it more bulky. This is usually accomplished by administering some lubricating material such as liquid paraffin, or some material such as agar or Psylla, either of which has the property of not being digested but of absorbing water, thereby adding bulk and moisture to the intestinal content. Then we have on the market, preparations in which the mineral oil is emulsified by means of a small amount of agar. In theory, one could not expect the oil and the agar to be of any value when used in combination because they have a different manner of working. There is a possibility however (as claimed by the manufacturers), that the combination may be of assistance in allowing the oil, because of its being emulsified, to be more intimately mixed with the feces.

The claim is made also that there is less danger from leakage. These contentions seem to have foundation.

Enemas of oil are of great value in some cases. They are given at bedtime and retained over night, and not alone do they have a soothing effect on the lower colon but also aid in evacuation the next day. Olive oil has been used for this purpose and more recently a less expensive kitchen oil such as Mazola has been found equally valuable. Cocoa butter seems to have a greater soothing effect than the others and is especially to be recommended in case there is marked spasm accompanied by pain.

Along with the above treatment some antispasmodic such as belladonna seems to have value. The writer has been in the habit of using

$\frac{1}{8}$  grain extract tablets, giving all the way from four to twelve a day, depending on the tolerance of the patient. Obviously, this drug has no value in ordinary cases of atonic constipation and is merely to be used in those patients in whom we believe that a spasm exists,

In the treatment of constipation and perhaps other forms of colon disturbance, the medical profession has neglected some of the physical aids that are more or less valuable. In those leading a sedentary occupation, and especially if the abdominal muscles are poorly developed, something may be accomplished by some form of active exercise. This may be in the form of golf, rowing, horse-back riding, or, in those who are less fortunate, daily exercise at home. The writer is not convinced about the value of electricity, although it is known that the sinusoidal current is being used with possibly some results. The psychic side of the treatment must not be overlooked, as we all know the mental attitude of many of these patients who are having abdominal pains, perhaps distension and the passage of mucus.

In treating *Ulceration of the Colon* except in that variety due to amoebae, the problem is much more complicated. The treatment of amebic dysentery has been mentioned in a previous paper before this Society. This disease requires prolonged treatment and the use of several drugs, as it has a marked tendency to relapse. In the paper referred to, Emetin was mentioned, and something was said about its dangers. Also stovarsol was given a definite place. Here again one must have in mind the danger of the drug, because arsenical poisoning is not rare. Chaparro amargosa seems to be entirely harmless and has considerable value. At least in the temperate zone, most of the writers have paid no attention to bismuth subnitrate, a drug found of great value in the hands of W. E. Deeks in Panama. He advises the use of the drug in doses of 180 grains (a heaping teaspoonful) every three hours night and day in severe cases. The writer has had very little experience with this but in at least one case has obtained what seems to have been a good result after the failure of other drugs.

As is now well known, at the Mayo Clinic, Bar-gen isolated in cases of so-called "non-specific" ulcerative colitis, a diplococcus, with which he was able to produce the same lesion in laboratory

animals and then recover the same organism. In the reports of this worker it would seem that the cause has been found, and yet some other workers are not able to verify this. From the reports furnished, treatment by means of vaccine from this organism seems to be of value. The treatment of this disease has been particularly unsatisfactory in the past although sporadic reports of therapeutic relief by means of various treatments crop up from time to time. Crohn and Rosenberg reported excellent results following the use of neutral acriflavin in a series of cases. Although the writer went so far as to obtain from New York this same brand of dye as was used by the New York workers, similar results were not obtained.

In spite of the excellent results obtained at the Mayo Clinic and with due regards to such relief as may be obtained from various drugs, this disease must still be considered as one that can be influenced with great difficulty and that it must occasionally pass into the hands of the surgeon.

Considering other forms of ulceration of the bowel, tuberculosis must be considered. This rarely occurs except as a complication of the pulmonary disease. In the majority of cases of tuberculosis coming to autopsy, ulceration of the colon is found. As shown by Cabot many years ago the presence of diarrhea is not characteristic of this disease. He pointed out that many cases of pulmonary tuberculosis, without the presence of ulceration of the colon, suffered from increased frequency of bowel movement. On the other hand, many of the patients who actually have ulceration of the colon do not suffer from diarrhea. From this it will be judged that this disease is not of great importance. Inasmuch as it is always a part of the pulmonary condition, the latter dominates the picture.

Before concluding a few words should be devoted to diverticula of the colon. This is not a rare condition and is picked up now and then by the roentgenologists, although there is no definite symptomatology. However, when one of these diverticula becomes inflamed (*diverticulitis*) there is a more definite clinical manifestation. This brings about a tumor mass usually in the region of the left lower quadrant and may resemble clinically as well as grossly at operation a carcinoma of the sigmoid. The x-ray findings are said to be characteristic in that one is able to see spike-like processes sticking out at various

angles from the lumen of the bowel. Treatment of this latter condition is entirely surgical, whereas, in the ordinary diverticulosis, these patients are helped by the usual colon management (lubrication, etc.).

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## ARGYRIA WITH REPORT OF CASE\*

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According to Myers, "Argyria," or Argyrism, or Argyrosis, is the term applied to a pigmentation of the skin which sometimes follows continued or prolonged administrations of silver or silver salts, due to an absorption and ultimate disposition of silver or a silver compound in the tissues and cutaneous surfaces. The discoloration may even be extended to other surfaces, such as the conjunctiva, the buccal mucous membranes, and the urethral tract.

While argyria was at one time a very common form of intoxication following the use of silver nitrate or other silver preparations, it is, at present, extremely rare in spite of the extended applications of silver compounds in therapeutics.

Silver nitrate held sway many years ago as a specific in the treatment of epilepsy, then tabes and finally gastric ulcer, and, although there were a large number of cases of argyria reported, there undoubtedly were many times as many cases not reported or at least they do not appear in the literature.

The first case of argyria was reported by Angelus Sala in 1647, using silver nitrate internally in the treatment of epilepsy. The second case of argyria was seen in 1791 by Schwedinauer and reported by Fourcroy. Early in the nineteenth century, on account of the extensive use of silver in the treatment of epilepsy and tabes, many cases were reported and it would not be surprising to find many cases at the present time in instances where the old form remedies are still in use.

Myers divides argyria into two main groups, which he calls "generalized" and "localized" pig-

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mentation. The generalized group will always have its pigmentation produced as a result of internal medication and absorption in which the blood is involved; while the localized group is composed of metal workers, and patients who receive local applications of the silver salts on the buccal, urethral and conjunctival mucous membranes. In local argyria the silver agent penetrates directly into the skin or by way of the mucous membrane, and the discoloration is limited to the place of application.

Kimball summarizes the pathology of argyria as follows:

"The discoloration of the skin is produced by an impregnation of the underlying tissues with very fine silver deposit lying underneath it, in the derma, in the connective tissue, about the hair follicles and the sebaceous glands, around the smooth muscle fibres, around the media of the medium-sized arteries and veins, and in the adventitia of the smallest vessels. A very important feature of the localization of these deposits is their attraction to the elastic substance of the connective tissue, the non-elastic substance being almost completely free from the deposition of silver."

Kimball further states that the silver deposits are abundant in the walls of the finer branches of the portal vein and of the small veins of the liver, in the walls of the small vessels of the spleen, and in the glomeruli of the kidney.

In the blood there is a definite stippling of the red blood corpuscles as in lead and bismuth poisoning, and a marked anemia is also frequently associated with the silver poisoning. He calls attention to the fact that physicians know the difficulties in the treatment of metallic poisoning, and should, therefore, use extreme caution in the employment of silver in internal medication or as an external application.

Myers refers to the statements of different observers as to the smallest quantity of silver preparation that will produce a generalized argyria. One writer reported 15 grains of silver nitrate as the smallest quantity on record; another gave 34.032 gr. of silver nitrate as the amount under his observation; another described a case after 4 to 6.5 grams of silver nitrate.

Davis, discussing argyria, refers to the fact that Myers was able to collect in 1923, forty-four cases of generalized argyria, all of the

early cases having resulted from the use of inorganic silver salts, there having been not a few cases of localized argyria in ophthalmology.

But only three cases of generalized argyria are reported in the literature as resulting from the use of organic silver salts. One writer reported a case following the ingestion of collargol for a gastro-intestinal disturbance; another was due to intensive collargol treatment for biliary disease over a period of one month; and the third followed the local use of argyrol in the throat twice daily for a year.

Davis further says that the treatment of the condition is very unsatisfactory; that the prophylaxis is better by warning people against the indiscriminate use of silver salts, as the silver once deposited in the tissues is difficult to dislodge.

Case Report. History: Mrs. A. M., aged 33 years, wished to have an examination of her chest made on account of constant pains in substernal region. On being questioned she gave a history of pain in epigastrium for about five years, associated with nausea and vomiting and loss of weight. Further inquiry brought out the fact that she had been under a physician's care who prescribed a capsule containing Bismuth subgallate Gr. V, argyrol Gr. V, and codein Gr.  $\frac{1}{8}$ , which she had been taking four times a day for the past five years.

Physical findings: Diffuse, generalized blue gray pigmentation of skin of face, body and extremities. Metallic deposit was present on the gums at the margin of the teeth. Heart and lungs were found to be negative. There was some tenderness in the right epigastric region of the abdomen. Blood pressure was systolic 104, diastolic 70.

#### Cytological Blood Report:

Erythrocytes .....	4,400,000
Hemoglobin .....	70%
Leukocytes .....	10,750
Neutrophiles .....	57.5%
Eosinophiles .....	0.5%
Basophiles .....	0.5%
Transitionals .....	1.0%
Sm. Lymphs .....	10.5%
L. Lymphs .....	10.0%
L. Mono .....	6.5%
Basal Stippling .....	

#### Blood Chemistry Examination:

Total Nitrogen .....	2961.00
Non-Protein Nitrogen .....	34.61
Urea Nitrogen .....	26.16
Preformed Creatinine .....	1.24
Sugar .....	72.1
Fibrin .....	0.390
Albumin .....	2.33
Globulin .....	4.40

Fluoroscopically: The excursion of the left diaphragm is normal; right one is apparently limited, especially at the cardiophrenic angle. Stomach is moderately low in position, fairly regular in outline, freely moveable and peristalsis was within normal limits. A good gastric-wall was seen as well as a fairly good pyloric sphincter that filled

well and emptied in usual time and was neither spastic nor tender. An enormously dilated duodenal cap was seen that was not emptied throughout the entire examination nor could it be emptied without palpation. There is a definite irregularity on the lesser curvature side of the posterior wall that was constantly present. However, it does not have the usual appearance of a lesion but suggests pathology outside the duodenal tract which may be a factor in the delay in emptying the first part of the duodenum.

X-Ray: Films confirm the fluoroscopic report and show a much dilated cap which is considerably compressed. Six hour observation shows the barium to be in the terminal ileum and a little in the cecum. This is probably a little more rapid than usual. Twenty-four hour observation shows the barium to be in the transverse colon, descending colon and a little in the sigmoid. The cecum is apparently empty. This shows rather rapid progress through the first part of the tract and suggests a possibility of trouble in the right lower quadrant.

On communicating with her physician, he gave the following information:

"I have seen this woman at infrequent intervals for some years and administered the silver per mouth in combination with bismuth subgallate and a small amount of codein so as to prevent her having the prescription refilled. Whether some unscrupulous pharmacist has done this, of course, I do not know. It is the only combination I ever found that relieved the gastric pain from which she suffers, especially after some alcoholic excess. This woman is a drug addict and for many years has taken large quantities of morphine. I attribute the absorption to the habitual constipation from which she suffers as the argyrol is eliminated by the intestinal tract and if the fecal circulation is O. K., I would never anticipate trouble. Although I have used this silver salt per mouth extensively for some years, this is the first case I have ever seen where there was a systemic absorption."

#### *Comment:*

Argyria due to the ingestion of argyrol, under the circumstances here detailed, is of rare occurrence, this being the only case of its kind reported in the literature.

The treatment of the condition is most unsatisfactory, but the prophylaxis is better by warning people against the indiscriminate use of silver salts, as the silver once deposited in the tissues is difficult to dislodge.

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## CUTANEOUS PLASTICS: THEIR SCIENTIFIC BASIS

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I believe it may be said without fear of contradiction that cutaneous plastic surgery, or skin grafting, has not received the amount of recognition from surgeons that recent advances in this art and its importance deserve.

Cutaneous plastics are most frequently indicated in cases of ugly scars following burns by fire or chemicals, and in defects following injuries or surgical operations. In a lesser degree this form of surgery may be used in connection with corrective procedures, to remedy congenital or acquired defects or malformations such, for example, as the "saddle nose" or the excessively humped nose. Cases of this type undoubtedly warrant cosmetic surgery.

Although free skin-grafting was known and practiced more than 2000 years ago, it is only within the last fifty years or so that it has been elevated to regular surgical practice. Reverdin<sup>1</sup>, in 1869, introduced the method of transplanting small pieces of cuticle or cutis on fresh or granulating wounds, and showed that such grafts survive and become united with the underlying tissues. In 1886 Thiersch<sup>2</sup> introduced the use of large epidermal grafts and both the Reverdin and the Thiersch methods are still in use.

The material for skin grafts may be obtained from the patient himself, in which case the graft is termed an autograft, or it may be taken from some other person, and then it is termed isograft. Skin grafts obtained from sources other than the human species, zoo-grafts, have been only rarely employed. Auto-grafts are preferable because it has been found that they are more likely to "take" than iso-grafts.

A scientific reason has been found however, which renders the use of iso-grafts much more general. I refer to the discovery that blood relationship governs skin-grafting just as it governs blood transfusion. Davis<sup>3</sup> suggested this blood grouping in 1916. Masson<sup>4</sup> in 1918 reported that it was then in actual use at the Mayo Clinic. Shawan<sup>5</sup>, however, in 1919, was the first to make a routine report in connection with some war injury cases. His clinical results in skin grafting, made on the basis of blood affinity, proved that the best results were obtained with auto-grafts



but that they were nearly equalled by iso-grafts, taken from donors of the same group. Incompatible grafts would degenerate and would not "take." If such a graft does "take" it probably means that the laboratory tests for compatibility grouping were erroneous.

I have mentioned that the Reverdin and Thiersch grafts, both of which are free grafts, are used for superficial defects. The objections to the large Thiersch graft are that a part of it may become necrotic and perish, and that it is subject to a considerable amount of contraction.

The Wolfe and Wolfe-Krause grafts, which include the whole thickness of the skin, are used especially for deep tissue defects. They are to be preferred to all free grafts.

Under the most favorable conditions and with the usual technic full thickness grafts have shown favorable results in only 40 to 50 per cent of all cases. A large amount of study and experience with free skin grafts have shown that success in this form of grafting depends upon four cardinal principles. These I have embodied in my technic and when meticulously carried out they enable me to obtain a considerably larger percentage of successful cases. My technic, governed by principles differing in some respects from current practice may be described as follows:

1. The graft cut exactly to size.
2. The grafts accurately adapted to size of wound.
3. Even pressure maintained at thirty millimeters of mercury on the manometer must be applied over graft and edge of wound of the recipient.
4. Immobilization.

Regarding the first principle I would say that it has been the practice of many to cut the graft, say, one-third larger than the defect. There is always some contraction immediately after the ablation of the skin, so that when the graft is cut exactly to the size of the defect, it will be probably about one-third smaller in adults and about one-half as large in children, but by careful approximation the graft can be brought back to its normal tension and size. Neuhof<sup>6</sup> has shown that there is a fibrinous exudate from the freshened wound surface within a few hours after transplantation which fixes the graft in place. This fixation seems to me to be aided

by having the graft at normal tension. The surface should be dry or satisfactorily granulated.

Second, the edges of the graft should be carefully adapted to the wound of the recipient by fine horsehair mattress and single interrupted sutures. The sutures should be removed in four days; followed by tension support for ten to fourteen days, as it requires this period for the scar edge to become organized. Although some very fine linear cicatrization cannot always be avoided, it may be rendered almost invisible by proper technic and judicious instrumentation.

Third, keeping a graft under an even, steady pressure is perhaps the most important condition for a successful "take." During the first twenty-four hours of the existence of the graft it is entirely nourished by lymph, and as is well known, lymph is abundant in the presence of venous stasis. A thin layer of gauze and cotton should cover the grafted area, over which an inflatable rubber bag is placed. This bag is connected to a tube which is attached to a sphygmomanometer kept at 30 mm. pressure. It is inspected twice daily and if the pressure falls it is again raised to the required level. This pressure, which is applied for four or five days, also prevents the collection of serum or the formation of a blood clot at the base of the graft, both of which may be destructive of results. Capillary pressure from the contiguous areas may lead to undesirable exudates if there be no local counter-pressure. Experiments by Ferris Smith have shown that when pressure lower than 20 mm., or higher than 60 mm. was employed the results were in no case as good as those obtained with 30 mm. pressure, which may be regarded as the optimum pressure.

Carlson believes that only slight pressure on the grafts and greater pressure above would result in more stasis, thereby more lymph. Such a method, even if it were scientifically the best, would probably be feasible on extremities but not very practical of the face.

Immobilization of the grafted area is highly important, because there should be no movement or disturbance which would rupture the delicate net work of fine vessels in the vascularization of the graft by proliferation from the capillaries of the host.

For marked facial defects, pedicled skin flaps are advisable. These can be cut from the scalp, forehead or neck. While these methods are

sound in principle there is a very strong objection to it in that it remedies one defect by creating another, and for this esthetic reason the Indian method should be used only in cases where it is absolutely necessary, as in the reconstruction of a complete nose. Such cases however are rare. The pedicled tube graft from the shoulder and arm is ideal for neck and face defects. In preparing a pedicled tube from the arm two parallel incisions are made, the underlying tissues between them are lifted and the two edges are sutured together following repair of the surface wound. This prevents infection of the inner side of the graft. Anyone with experience in this work can tell at once on inspection of the tube whether its nourishment is satisfactory; if so and the defect to be covered is small and its surface ready, the distal end of the tube is severed, the edge brought up to its site and sutured into place. The end of the tube must not be detached unless its circulation is satisfactorily established. As a rule it is best to allow the pedicled tube to remain for at least ten days before one end is cut and attached to its ultimate site.

I desire to draw attention to another frequently observed class of cases, the scars and other cutaneous defects resulting from the manipulations of quacks who pose as beauty specialists. We are now living in an age when the pursuit of personal physical beauty seems to have become an obsession with a large number of people, especially those of the female sex. The natural desire for beauty is said to be keenest where refinement is greatest, but it is more probable that the desire has been created and fostered by the alluring advertisement of the wily quack, who blandly asserts that beauty is a purchasable commodity which can be obtained almost as easily as a pound of sugar. The favorite methods of these men consist of skin peelings produced by caustics and escharotics, such as phenol, resorcin and salicylic acid, in tinting the skin with anilines, and in filling depressions with paraffin, a method which necessitates removal and subsequent skin grafting.

In conclusion, I would say that the points touched upon in this paper, the blood compatibility in skin grafts, the cutting of the graft to the exact size of the defect, its approximation under normal tension, the application of a steady optimum pressure, and finally immobilization, represent real advances in skin grafting which

raise this branch of surgery from an empirical to the scientific plane in which results can be prognosticated with some degree of certainty. The profession should know and appreciate that by these improvements skin grafting is no longer a chance method but one which promises, in well selected cases, reasonable success.

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### REPORT OF A CASE OF ADDISON'S DISEASE\*

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Looking back over the history of this case, it seems that each point at which it deviates from the normal has occurred in definite sequence and each related to the other.

The first acquaintance with this man occurred two years ago.

At that time he was about forty years of age, ruddy complexion, vigorous and active. He weighed 210 lbs., was not fat and worked as a blacksmith. Parents, both living and enjoying good health; a fairly large family of sisters and brothers, all rather large, robust and in good health.

His wife had died two years previously of pulmonary tuberculosis.

A year ago, he had what at that time appeared to be an acute arthritis of the right knee joint.

The joint was very painful, very sensitive, swollen and there was evidence of fluid in the joint.

When seen in November, 1926, he stated that the knee had recovered but motion was limited. This proved to be a tubercular infection.

At this time, November, 1926, he was much concerned about a swelling on the front of the chest, to the left of the sternum over the lower costal cartilages. This swelling was a bluish red in color, and fluctuated; not painful but slightly tender. Had been developing slowly over a period of weeks. It was evidently a tubercular abscess.

Up to the time of this examination, the pa-

\*Read before the Irving Park Branch of Chicago Medical Society, February 24, 1927.



tient had been at work daily. He found it more and more difficult to keep at it, owing to a constantly increasing weakness.

He lost 60 lbs. in weight in five or six months and mentioned the fact that he had noticed an almost complete loss of appetite for nearly a year, and that more recently he had been troubled with frequent attacks of vomiting after taking food.

His color, while lying in bed, was good.

He did not have the appearance of a very sick man and the facts stated were brought out only by persistent questioning.

It was noticed that any attempt to sit up or get out of bed was accompanied by a sudden pallor and a feeling of faintness and dizziness.

His temperature was 99; pulse 90; blood pressure, systolic 90, diastolic 75.

His chest gave no signs of abnormality. His heart tones were weak but no valvular lesions were found.

Abdominal examination was negative as to findings.

He was sent to the hospital with a provisional diagnosis of miliary tuberculosis and tubercular abscess of the chest.

Urinalysis was negative.

X-ray examination of chest was thought to confirm the diagnosis of miliary tuberculosis but not so clearly as to be convincing.

One cartilage had the appearance of having been destroyed but this later was found to be due to calcification.

Dr. Roberg examined the patient and concurred in the absence of definite findings but pointed out the fact that the low blood pressure would indicate involvement of the adrenals.

From that point the diagnosis was gradually arrived at.

The function of the adrenal glands is not definitely known, the exact mode of action is still a subject for debate.

It is known that the adrenals play a large part in blood pressure regulation.

So much so, that it is said that extremes of blood pressure, high or low, point to adrenal disorder.

The secretion likewise influences the temperature.

The entire muscular system depends for its efficiency or tone on the same organs. And,

possibly, all these effects may be due to its profound effect on metabolism.

So, the absence of the adrenals or their destruction whether by tuberculosis, cancer or otherwise, brings rather definite findings.

Such findings as this patient exhibited.

We tried to substitute adrenalin hypodermically, but without results after the first attempt.

His temperature varied between 98 and 99.

His red blood count was 4,890,000.

His hemoglobin remained near 90.

Both are characteristics of Addison's disease. The anemia is slight, if present at all.

His white count was 13,700.

His blood pressure gradually declined, until on Dec. 13, 1926, it was 80/65.

Prostration and vomiting continued.

He died December 20, 1926.

There was missing in this case a symptom which was formerly considered absolutely characteristic; namely, the bronzing of the skin.

More cases are being found, recently, in which the bronzing of the skin does not appear.

The following is an autopsy and report by Dr. M. R. Broman.

Autopsy held Dec. 20, 1926.

Clinical diagnosis. Tubercular abscess of chest wall. Tuberculosis of Adrenal Glands (Addison's Disease).

The body is that of a white male, approximately 160 cm. in length and weighing 150 lbs.

Skin is of a yellowish white color with no pigmentation.

There is moderate edema.

The sclera are clear and pupils are dilated.

There is a fluctuating swelling of sixth left rib at the sternal junction.

Upon incising this area, a thin cream-like pus escapes from an abscess 7x6 cm.

There is no destruction of costal cartilages but considerable calcification.

Lungs are crepitant throughout. There are no areas of consolidation and no tubercles.

There is a healed calcified area in the apex of the lower lobe of the left lung. Lungs have a feathery feel.

Heart weighs 210 grams and is firm. Cut surfaces reveal a dark brownish color, typical of "Brown Atrophy."

The valves reveal no gross abnormalities. The bowels are collapsed and upon incising there is no pigmentation, and no ulceration. The spleen weighs 208 grams.

The liver tissue tears readily and lobules are indistinct.

The adrenal glands are enlarged, the left weighing 37.5 grms. and the right 16 grms.

The glandular structure is practically entirely replaced by a caseous material and the right gland contains a few tubercles.

There is an inflammatory reaction in the peri-adrenal and peri renal tissue, so that the kidneys are difficult to remove from fatty capsule.

The kidneys together weigh 360 grms. and there are two tubercles in the cortex of the right kidney.

The cortical markings are indistinct.

The prostate gland, testicles and seminal vessels reveal no gross abnormalities.

The lower end of the right femur contains erosions along the articular surface and there is a thick gelatinous substance with numerous greyish flakes.

Microscopic sections of adrenal tissue reveal a typical caseous tuberculosis with few areas containing tuberculosis.

Anatomic Diagnosis: Chronic tuberculosis of the lower end of the right femur.

Bilateral caseous tuberculosis of the adrenal glands.

(Addison's disease). Tuberculous abscess of the left chest wall old healed calcified tuberculosis of left lung.

Emaciation moderate. Brown atrophy of heart.

Hyperplasia of spleen. Parenchymatous changes of liver and kidneys. Moderate amyloidosis of the spleen, liver and kidneys. Emphysema of the lungs.

M. R. BROMAN.

## APPENDICITIS AND THE GENERAL PRACTITIONER.

H. A. FELTS, M.D.

MARION, ILL.

Appendicitis is a disease which occupies the attention of the man in general practice more and more as experience with it grows. No attempt will be made here to discuss the disease in all its phases. I shall, however, call attention to a few points in the symptoms, pathology and treatment which, no doubt, are well known to all of you but which always bear repetition.

The older men here remember quite well when appendicitis was unheard of. You had your typhlitis and perityphlitis and ascribed most of the pains in the lower right quadrant of the abdomen to those causes. Some of the older surgeons suspected the possibility of the appendix being at fault and as long ago as 1750 Mestevier of France reported a case of appendicitis with perforation. Other cases were reported at intervals and in 1827 Melleir describes appendicitis in

*"The Journal of Medicine, Surgery and Pharmacology."* In that article he said, "If it were possible to establish with certainty the diagnosis of the affection, we could see the possibility of curing the patient by operation. Perhaps some day we shall arrive at that result." However, for half a century the profession held to the view that abscesses in the right ilioec fossa took origin from the cecum—hence the term "typhlitis."

The etiology of appendicitis is practically always bacterial. Trauma, both external and internal, may be a factor but it is rare. Age is of little moment. It is rare in infancy and unusual in old age. Of the bacteria the *B. coli* and *B. staphylococcus* are the worst offenders. There may be a streptococcic infection of the appendix—usual termination in a fatal peritonitis. The pneumococcus, tubercle bacillus and actinomycetes have been assigned as causes in appendicitis but are rare.

The various pathological processes may involve one, two or all the coats of the appendix. The nature of the pathology is largely dependent on the nature of the infection, rapidity of onset and the ability of the patient to react to the infection. The mucosa of the appendix may be alone involved giving rise to a simple catarrhal appendicitis which may be without special symptoms except very little tenderness. If the catarrhal appendicitis does not recede but should continue there will be pressure atrophy of the mucous membrane with ulceration and suppuration. Even then there may be no perforation but an enlarged, swollen, red organ which may rupture. As tension within the appendix increases a point is reached when the walls give way and rupture occurs.

Gangrene of the appendix may occur due to pressure of foreign bodies—as fecal concretions, or from pressure of contained pus, or by infection of the walls. Gangrene may be an isolated local spot or it may involve the entire organ—with or without suppuration. If the inflammatory process within the appendix has not been too rapid the peritoneum will have walled off the entire region and the infection is confined to the vicinity of the appendix. There will be a circumscribed abscess which can be evacuated without invading the abdominal cavity.

If adhesions do not occur as the inflammatory



process is under way the infection is not confined to the region of the appendix but is liberated into the free peritoneal cavity and peritonitis is the result. Even if the infected material is liberated into the peritoneal cavity nature continues to try to localize the disease and we frequently have a local peritonitis. In those cases in which nature has been unable to stem the tide of the invading infection and a protecting barrier has not been thrown around the region of the cecum and appendix the entire peritoneal cavity is open to infection and a general peritonitis of greater or less degree is the result.

This short discussion has had to do with acute appendicitis. Chronic appendicitis may be so insidious in its development that the patient may experience none of the symptoms of an acute attack. Both the insidious chronic and the relapsing cases lead to a proliferation of connective tissue causing the appendix to become indurated and in some cases to entirely obliterate the lumen of the appendix—the so-called appendicitis obliterans. In all cases of chronic appendicitis there are more or less adhesions binding the appendix down to surrounding tissues.

The symptoms of appendicitis are too well known to take much time discussing them here. There is a sudden severe pain in the abdomen usually referred to the epigastrium, nausea and vomiting soon after onset of pain; general abdominal sensitiveness, centering over the appendix; muscular rigidity; elevation of temperature; leucocytosis.

The primary pain in cases where the appendix is free from adhesions is practically always referred to the epigastrium. In those cases in which the appendix is embedded on the cecum, fixed to the parietal peritoneum or adherent in the pelvis the pain is usually at the site of the appendix. After the first thirty-six hours the pain is not colicky as in onset but of inflammatory type and is due to periappendicular involvement. Pain is elicited upon pressure over the appendix and in most cases, even in those in which it is doubtful if the cause of the pain is the appendix, pressure over the descending colon will produce pain in the region of the appendix. As a student I heard Dr. John B. Murphy say more than once that "in

cases causing abdominal pain in the right lower quadrant it is caused by appendicitis."

The pain may be referred elsewhere than in the epigastrium. I well remember a case in my own experience in which the initial pain was in the right shoulder. For several hours the cause of the pain was unknown. After six or eight hours the pain centered over the appendix and a positive diagnosis was made and operation done with complete recovery. There is often pain in the region of the gall bladder—sometimes very confusing. It may also be referred to the umbilicus, rectum or chest.

Nausea may be the first symptom the patient observes although it is usually later in the attack.

The general abdominal tenderness is at first diffuse but within a few hours localizes over the appendix. The abdomen is soft on palpation unless the inflammation has invaded the peritoneum around the appendix. Then there is the so-called muscular defense in which the abdomen is resistant to palpation—sometimes to the degree of board-like rigidity.

There is a rise of temperature varying from 99.5 to 104 or more. The temperature gives little information so far as diagnosis is concerned.

The white blood count is a fairly accurate barometer of the severity of infection. In acute appendicitis the white count rises from the normal 6,000—8,000 to 12,000—16,000 or more. In the normal blood count there are 60% to 70% of neutrophils. In disease this percentage increases in proportion to the resistance of the patient, virulence of the infection and the extent of infection. If in a rising white count the percentage of neutrophils increases the patient is not reacting favorably.

The treatment of appendicitis has been discussed often and there is yet room for argument. Warbasse, in the *Surgical Treatment* says that "while most cases (perhaps 75%) will recover without operation if left alone, in competent hands operation has so little hazard and the dangers of the disease are so great and its course so uncertain, operation should be the rule."

The mortality following operation for appendicitis is from 2 to 7 per cent, (Warbasse). In cases not operated on the mortality is from 20 to 25 per cent.

## EARLY MANIFESTATIONS OF MENTAL DISEASE AS OBSERVED BY THE GENERAL PRACTITIONER

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The public is beginning to realize that one of the greatest services the medical profession can render to the individual and to the state is the prevention of mental as well as bodily disease. It is no uncommon experience for the general practitioner to be called upon to pronounce judgment on the mental state of a patient. The important thing is the recognition of early symptoms of mental disorder or defect and proper treatment to check the full development of insanity if possible.

From a legal standpoint only disorders of behavior are considered in the diagnosis of insanity. If an individual is unable to take care of himself and to support himself and if he does not live up to the general expectations of society, in the absence of physical defects, he is considered insane. From a medical standpoint the diagnosis is much more complicated. In insanity from a medical point of view we ask the following questions: What are normal and what are abnormal functions of the brain under the existing circumstances? Where is the dividing line between both? What are the causes of the abnormality? What can be done to remedy the condition?

This paper is written for the general practitioner to give an outline of the most common manifestations of early insanity. We must therefore first differentiate insanity from other mental aberrations as for instance feeble-mindedness and psychopathy.

*Mental Defect or Feeble-mindedness.* There are three classes or mental defectives: the idiot, the imbecile and the moron.

The lowest type is that of idiocy. An idiot is an individual with physical stigmata, who is unable to take care of himself and who cannot learn anything. The idiots form the largest part of inmates in institutions for the feeble-minded and have to be cared for from the first day of their lives until the last. All kinds of deformities can be found from microcephalus, macrocephalus, cleft palate, blindness, to monstrosity. In the next class we find the imbecile. They make up a very large group of the feeble-minded. Most auth-

ors define an imbecile as an individual who is able to take care of his own person but cannot learn anything but simple manual work. The higher grade imbeciles go to school, reaching the third and fourth grades and can be trained to do some kind of manual labor. They often become some of the best workers. After they have learned to do a certain thing they take great pleasure in doing just that kind of work for years. Many factory workers, street sweepers, laundry and scrub women are high grade imbeciles. They are happy in that work and they fill a great need. Whenever they are drawn into complications, however, they become upset and need assistance. These persons are subject to periods of excitement, have little sense of responsibility and poor judgment.

The highest grade of feeble-minded individual is the moron. We do not have the same conception of a moron as the newspaper reporter, who calls only sexual delinquents morons. Any moral delinquent can be grouped with the morons; thieves, burglars, sexual delinquents and for the most part the high grade, harmless mental defective. In proper surroundings their mental shortcomings may be hardly noticeable, some are even brilliant intellectually, but they have no keen conception of right and wrong. Many criminals belong to this class.

*Symptoms of Mental Defect in Infants.* Convulsive states of very different etiology and of different prognostic importance are common in infancy and test severely the powers of the practitioner to differentiate one from the other. A convulsion may be due only to an error in diet, it may mark the beginning of an infectious disease, it may be the preliminary to a long and serious infection: encephalitis, which if resulting in recovery may leave the child an imbecile, hemiplegic or epileptic. Repeated convulsions in themselves have a retarding influence upon mental development and in the early months of life are perhaps the most common symptom of a defective brain.

At birth the infant exhibits only reflex movements because the motor tracts have not as yet become medullated. The suction reflex is the most important in the new born and its absence is always a disquieting symptom unless it is only partially or intermittently absent. If the taking of the breast appears to be a new experience to the infant each time, one may suspect a mental



defect. At the end of the second month the normal child will follow with his eyes a bright light in a dark room. An infant failing to do this is usually either blind or mentally deficient. At the end of six months babies should have the power to sit up and to grasp objects. Failure to coordinate its movements is likely to indicate mental backwardness. The increasing control over the facial muscles gives also an index to the mental development of the child. At first the smile is reflex and spastic, the lips are not under voluntary control and permit escape of saliva when the child bends forward. Failure to develop control over the facial muscles for a long time may be due to a birth injury of the cortex or to a congenital mental deficiency. In a normal infant we notice the persistent practice of enunciation and a gradually increasing number of sounds and the understanding of speech, as well as association of ideas with sound and sight. This is not found to a marked degree in the feeble-minded. The physical examination in those cases will sometimes reveal evidence of abnormality, as for instance microcephalus, macrocephalus, deformities of the palate and ears, retinal degeneration or evidence of cretinism.

In childhood a differential diagnosis of neurotic conditions, hysteria or insanity can usually not be made. Excessive emotional reactions, extreme and persistent restlessness, day dreaming and shyness are symptoms of some mental reaction. It is difficult to state where the abnormality begins and the normality ceases. The personality of the child, its environment and training must be considered. In a general way it may be said that in mental disease there is a definite change in the personality of the child. In the neurotic there are indications that the individual always has been peculiar in some ways. The mental growth of children of school age can be ascertained by various tests of which the Stanford modification of the Binet-Simon test is the most commonly used.

*Neurosis and Psychopathy.* The next division of mental abnormality are the neuroses and the psychopathies. Among the neuroses we have neurasthenia, hysteria, anxiety and obsession neurosis. The term neurasthenia is so well known that it does not need any further explanation. We find excessive somatic complaints in that condition, without an adequate physical basis. In hysteria we have a large symptom complex and a

disproportionate reaction, as for instance: "A child bitten by a dog is apt to be afraid of dogs for some time but if that child carries an unreasoning terror of anything with four legs on that account into adolescence, we realize that he is dominated by the past and we call him hysterical." In a general way we may say that we find excessive phobias, twilight states, stuporous conditions, mania, convulsions, paralysis and areas of local anesthesia in hysteria. This is not an uncommon condition and every physician in practice has met with some cases of that kind. Those patients are very suggestible and difficult to handle. We must take into consideration the frequency of mental disease beginning with symptoms of an ordinary neurosis. The differentiation then is often not possible until the psychosis fully develops.

Among the psychopaths we have first the constitutional inferior type. In this class belong people with a marked inferiority complex, which is usually based upon a physical inferiority and a realization of such. They are unable to make headway in life.

The second group of psychopaths are the peculiar personalities. In this class we find the cranks, hoboes, wanderers, squanderers. Many of them fill the poor house and are subject to charity.

The last group of the psychopaths are the psychopathic personalities, with the more severe kind of mental aberration. They are subject to impulsive acts, and seem to have no definite aim in life. They are unable to get along with other people and may have very peculiar habits. These are on the border line of insanity and present some of the greatest problems to society.

*Insanity.* So far we have discussed abnormal mental conditions that have existed throughout the life of the individual. In mental disease proper we must have a definite change in the personality and a change in the reaction of the individual to environment. This change in personality often comes under the observation of a physician and is most important in the diagnosis of mental disease.

*Dementia Praecox,* the most common mental disease, was formerly thought to have its beginning at the time of puberty or adolescence; there is much evidence now that the disease can begin in childhood and as late as the time of menopause. We find the first changes in de-

mentia praecox in the emotions, while the intellect is affected much later and sometimes even in the late stages only moderately. There is a marked inconsistency in reaction to a stimulus. They may show no emotion under circumstances that would much upset normal individuals, and they may present unprovoked outbreaks of rage, fear or laughter. They may laugh heartily when talking about some misery or they may shed tears when someone tells a funny story. Misfortune, disease and death of members of their family will produce no demonstration of sorrow.

Dementia praecox may develop after prolonged stress, overwork, after a disappointment in love, after child birth or after an infectious disease. It must not be forgotten however, that there is usually a hereditary predisposition in those cases. Some of these patients have been perfectly normal in childhood and youth, others always have been somewhat peculiar, shy and seclusive, they have spent much time in day dreaming. Their ideas have been bizarre, they seemed to ponder over deep questions in philosophy without expressing any rational ideas.

The most common early changes in dementia praecox are given by the following two case histories:

Case 1. A young woman who has been married about a year and had formerly been very neat about her person and a good housekeeper, seems to lose interest in her household, husband and baby. A visitor coming into her house will find her standing around or wandering about while the baby is crying and the dishes have been only partly washed. The house looks disorderly and the young woman herself has not even combed her hair and her dress has not been fastened right. The husband complains that when he comes home the baby has not been cared for, the supper is not ready and the house does not seem like home any more. He cannot give any reason for the change, nor will the wife be able to give a satisfactory explanation.

Typical case 2. A boy, twenty-two years of age, has not been very bright in school, but managed to get along. He was a very sensitive, well meaning person, modest and tactful. He gradually became shiftless and changed his position repeatedly without any definite reason. He became unable to concentrate on one subject. He started reading a piece in the newspaper but soon shifted to another subject. He did less and less work. His father, who believed that the boy should be punished, had terrible scenes with him, without result. The boy gave no reason for his laziness, considered the matter a joke and said that he knows all right what he is doing. Not until he attacked his sister without any provocation was the question of mental disease considered. Upon careful observation they noticed that

he stood behind the curtain near the window looking out frequently and mumbling to himself. He was beginning to show signs of fear and ideas of persecution.

There is a great variety of symptoms in dementia praecox, but one can always find words and actions by the patient that do not fit in. They are bizarre, grotesque and inadequate.

In manic depressive insanity we find either the manic or the depressed reactions. In melancholia, or the depressed phase of the disease we find a dullness of emotions with a general slowness. Good news as well as bad news are received with the same indifference; there is no real grief nor joy. Speech and motion are much retarded. Perception and orientation are normal but volitional attention is poor. This condition must be differentiated from encephalitis lethargica and early paralysis agitans.

In the manic there is an excessive reaction of joy or grief. The patient can be moved to tears or laughter on slight provocation and which, although appropriate, is excessive in degree and startling in the rapidity with which it vanishes. He is over active and over talkative, never finishing a sentence and jumping to another subject. These cases are diagnosed with ease.

*Involution melancholia* occurs in women after the menopause with agitation and restlessness and usually with ideas that they will never get well. They constantly complain and cry about their worthlessness or about the great wrong they have done. They do not see how people can bear to have them around, yet they will constantly follow up others and talk about their troubles. They think they have a bad odor about them, that they are rotting away inside and are mean.

*Toxic and infectious psychoses* are mostly of the confused or lethargic types with delusions and hallucinosis. This can often not be distinguished from dementia praecox except that in the former cases there is a history of a previous infectious disease—notably childbed fever, or a history of exposure to poison, as for instance alcohol, morphine or lead. The patient gets well several months after the products of infection or toxin have been eliminated, while in dementia praecox the physical improvement is not followed by a mental clearing up.

*General paralysis of the insane* is not difficult to diagnose because the physical and laboratory findings are quite definite. The mental symptoms are commonly those of expansive ideas of



excessive wealth, exalted positions, or of having an abnormally large number of children.

Senile dementia is here omitted because its early diagnosis is of no therapeutic value.

These are the most common mental diseases according to the classification by Kraepelin, which is now used universally. Nothing has been offered quite so comprehensive and adequate as this classification. We must remember, however, that a classification should not be too rigidly adhered to. If a classification fits a case it is a good classification, but when a patient is to be fitted into a classification then it is a disadvantage. We should consider a patient with an open mind, especially as far as the course of the disease and prognosis are concerned. I have known cases to get well who were of a very poor prognosis as far as Kraepelin's classification is concerned and again I have seen cases become hopeless dements who came into a state hospital with a good prognosis. Our knowledge of the cause of mental diseases, the treatment and especially of the prognosis is still very limited.

#### POST-OPERATIVE PULMONARY EMBOLISM, OR WHY PEOPLE DIE SUD- DENLY AFTER OPERATIONS

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MT. VERNON, ILL.

I have selected this subject because of a number of such accidents that have befallen myself as well as a number of my friends and associates and because the literature seems to be very scarce upon the subject which I consider very important.

From the fact that most surgeons write papers lauding their skill, but it is the end results that count and that the patient is most interested in. I have mentioned particularly in the title of this paper the pulmonary embolism because that represents 90 per cent of the sudden deaths after operations, especially pelvic. It is a post-operation complication of which all surgeons are familiar and though occurring in only a small number of operative cases the certainty with which death soon follows its unexpected and sudden development, interrupting an otherwise uneventful convalescence, establishes it as one of the most dreaded complications.

Post-operative pulmonary embolism may be caused by a dislodged blood clot, the entrance of fat into the circulation, or a combination of both,

but only blood-clot embolism is considered in this paper.

It is not the purpose here to add anything new in the way of diagnosis and treatment of such a familiar and rather hopeless condition, but to try to determine just what type of case and operation produce the most frequent occurrence of such a fatal post-operative complication.

Embolism has been recognized and studied from all angles since the year 1846. Virchow, working from 1846 to 1856, put the doctrine of embolism upon a sound basis. The next most important work upon this subject was carried out by Cohn and later by Cohnheim. The writing of Welch upon thrombosis and embolism is a classic.

*Symptoms and Diagnosis.* Fortunately, since it is usually fatal, pulmonary embolism occurs in only a very small number of operative cases. It is a condition for which little can be done, when once the surgeon is sure of the diagnosis in cases that live for several hours, and most cases die within such a short time after the appearance of symptoms that the surgeon seldom reaches the bedside. The occurrence is probably more frequent than is generally thought, since many cases that complain of pain in the chest with comparatively no physical findings are mild pulmonary embolus. Such cases are often wrongly diagnosed pleurisy, myostis and bronchopneumonia and it is highly probable that many cases that are diagnosed bronchopneumonia are pulmonary embolism of moderate severity.

Wyder, quoted by Ochsner and Schneider, thinks that atheroma of the coronary arteries may simulate pulmonary embolism, but there is usually the history of previous attacks. Schumacher, quoted by Ochsner and Schneider, thinks that sudden internal hemorrhage, also myocardial degeneration may produce a similar picture. In the series of cases reported here, the diagnosis has frequently been confused with myocardial degeneration and pulmonary embolism may produce very similar picture, but in cases which have had a very thorough pre-operative examination with no previous history of cardiac trouble, the diagnosis would be much more in favor of pulmonary embolism.

The usual picture of post-operative pulmonary embolism is a patient with an uneventful convalescence, usually somewhere within the first or second week after operation, while engaged

in some form of physical exertion as walking about, taking a bath, or straining at stool, suddenly feels faint and falls to the floor. They often complain of precordial pain, of a tightness through the chest, dyspnea is marked, respiration rapid and labored, with marked cyanosis. The pulse is rapid and of poor quality. Cold sweat often stands out on the face, which bears a very anxious expression. The extremities are cold and clammy. Death often follows within five to twenty minutes.

Precordial pain, a pain through the chest, or a feeling of tightness through the chest is a fairly constant symptom. Sudden pain in the chest occurred in a high percentage of the cases here, and could probably be found in a larger number, should the patient, being rational enough to answer intelligently, be questioned regarding it.

The presence of noticeable varicose veins, or a previously existing thrombophlebitis lends much weight to a diagnosis of pulmonary embolism.

*Prevention and Treatment.* When once a pulmonary embolism has developed, even if there is enough time before death to do anything, the treatment is rather discouraging. This being true, the most of the surgeon's attention should be given to measures which may prevent as far as possible, such a fatal complication.

Conditions favoring the development of post-operative embolism may be grouped under two general heads: Faults in the patient and faults in the operative technique and post-operative care. Under the former head may be mentioned such conditions as anemia, microorganisms in the blood stream, and general physical conditions below par, excess of white blood cells and excess of calcium salts in the blood.

Kretz was able to find some primary infectious focus in every case of fatal pulmonary embolism from primary thrombosis. In some cases the walls of the veins were inflamed, but in others the intravascular coagulation was due to infectious organisms in the blood.

Gibson mentions infection from the intestinal canal, sepsis which may exist before operation and concentration of the blood as some of the predisposing causes of pulmonary embolism.

Lenormant, in 792 operations, reported pulmonary embolism in 0.05 per cent. He ascribes

the thrombosis to infection not necessarily occurring during operation, but possibly due to paralysis of some part of the digestive tract with absorption of septic matter.

In reviewing the literature on the subject he states that 106 out of 233 cases of pulmonary embolism proved fatal.

He thinks that prevention is the only treatment and advises digitalis before operation when the pulse is small and the heart action weak and also in cases of large abdominal tumors. Injections of salt solution are indispensable, he believes, before attempting any operation when the patient is anemic from profuse hemorrhage or arterial tension is much reduced.

Anesthesia should be brief as possible.

Such conditions as have been mentioned under faults with the patient as far as possible should be guarded against and combated as far as it is practical, but the surgeon is often compelled to operate upon a case that is in poor physical condition, knowing that such a case is a poor operative risk. All foci of infection should be cleaned up as suggested by Wilson.

Many faults of operative technique and post-operative technique care have been mentioned by many writers, each man thinking that he has the proper solution of the problem. Looking through the literature on the subject one finds that the use of the Trendelenburg position is mentioned a number of times as a predisposing cause of post-operative embolism. Many surgeons think that any position which interferes with the circulation in the veins of the lower extremities is a predisposing cause.

Zweifel, quoted by Ochsner and Schneider, reported eighteen deaths due to pulmonary embolism in 1,832 cases in which operation was performed upon a table which interfered with the circulation of the lower extremities or one death in every 100 cases operated on and only three deaths in 860 cases in which operation was done upon a table without this feature. He advises that precaution be taken to avoid all pressure upon the veins of the lower extremities as occurs when legs hang over the table and the Trendelenburg position.

Further statistics by him showed five deaths from thrombosis in 450 laparotomies, although the extremities were not traumatized during the operation but following a change of technique



which change consists in the absolute control of the oozing of blood and the application of a purse-string suture covering all raw surface in the pelvis. He had five deaths from thrombosis in 2,060 laparotomies and one death in 484 operations for fibroids of the uterus.

Olshausen, another authority, calls attention to the frequent occurrence of pulmonary embolism in cases operated upon in the Trendelenburg position, reporting fourteen cases of thrombosis in 2,443 operations. Five hundred and seventy-one of these were fibroids with seven cases of thrombosis. Abandonment of a position which compressed the veins of the lower extremities gave very gratifying results.

Eberth and Shimelbusch, quoted from Cumston, showed with their experiment that a single uncomplicated slowing down of the flow of the blood whether it causes migration of the leukocytes toward the vessel wall or forces the blood corpuscles toward it cannot in itself result in the formation of the clot within the vessel when no other lesion is present; that when the vessel wall is injured the blood plates may appear in the upper strata of the stream due to a slowing of the latter and as they come in contact with the injured portions of the vessel walls they become adherent there and more or less agglutination of the blood plates results; the blood plates in the development of these thrombi are the integral etiologic factors. With a circulation in good condition, the development of obstructing thrombi is rare unless there are some further local complication.

Zurhelle discusses the connection between post-operative thrombosis, infection and the depositing of fibrin. His conclusions from much research were that a retardation of the blood stream is the main factor in the production of a thrombus and that there is a mechanical piling up of the blood plates in the more sluggish blood stream. This conglutination of the blood plates is not necessary for the formation of thrombus; when it occurs it is secondary. His experiments show the uselessness of attempting to prevent thrombosis by reducing the coagulability of the blood, since one is unable to act on the blood plates. All that can be accomplished is to prevent the blood stream from becoming sluggish.

Aschoff suggests that it may be possible to prevent thrombosis by changing the physical condi-

tions in the circulation by combating any tendency to a slower pulse rate. He does not believe that thrombosis is always of an infectious origin but superimposed infection transforms a primary insignificant thrombus into a dangerous thrombophlebitis.

Fromme, quoted from Ochsner and Schneider, put into the jugular veins of rabbits silk threads impregnated with bacteria. The threads impregnated with any form of bacteria regularly produced thrombi. Sterile thread produced thrombosis only in anemic animals or those in bad physical condition.

Talke, quoted from Ochsner and Schneider, placed cultures of staphylococci near thirteen arteries and thirty-one veins in thirteen animals. The removal of these vessels after nine to twelve hours showed eleven arteries and twenty-two veins to be thrombosed.

McCann thinks that the transfixion of pedicles and tissues is a cause of pulmonary embolism. He especially condemns the transfixion of the broad ligaments, omentum and mesentery, avoiding unnecessary clots and hematomas which often become mildly infected. He warns against stitching too tightly and cutting into blood vessels, and stresses the point that vessels should be picked up cleanly and ligated with technique and the use of instruments that cause the least trauma to vessels and surrounding tissue; stating that he has had no case of embolism since adopting this method.

A. L. Smith believes that pulmonary embolism is due to a hyperfibrinous condition of the blood. He takes pains to let his patients drink freely, sees that the full normal proportion of water is in the blood and keeps up the fluid after operation. He advises the reduction of the length of time on the operating table and the use insofar as possible of round pointed flat-eyed needles to reduce hemorrhage. He believes in free early movements of the patient after operation.

Wilson stresses as precautionary measures the reduction of vascular traumatism to a minimum at operation and the encouragement of very early free movement on the part of the patient.

As a cause of femoral thrombosis, injury to the edges of the wound by retractors has been mentioned.

Symonds thinks that enforcement of dorsal position and knee pillows after a laparotomy

favor thrombosis by starving the circulation. He has abandoned enforced dorsal position in all but grave cases of peritonitis and encourages free movements. He has not had a case of pulmonary embolism in many years.

Lenormant calls attention to the careful management of veins while operating. Veins of any size should be ligated separately rather than in a bunch. In abdominal work especially, care should be exercised in avoiding injury to the epigastric veins. After operation he recommends stimulants for the heart, saline injections and copious intake of fluids to combat thickening of the blood. An early purge is used by some surgeons to combat stasis in the intestines. The patient should not be allowed to lie perfectly still, since this favors the formation of thrombus.

Patients should not be out of bed too early. In regard to some forms of anesthesia Lenormant states that Ranze advises preliminary scopolamine and morphine to reduce the amount of chloroform. Witzel prefers ether which is less depressing.

Otte, assistant at Riseman's Maternity Hospital, believes that the technique for general anesthesia which has been in use for several years there has prevented any serious complication. The special features of this technique are a disinfection of the air passages and prevention of chilling the patient. The mouth is repeatedly washed out with a disinfectant and steam inhalations of a mixture of thymol, salicylic acid, alcohol and water is given. This is again given after the operation, while the patient is still sleeping. Ether is used for the anesthetic. He states that even in patients with pre-existing respiratory infections no aggravation has occurred since this technique was introduced.

Maclaure reports a case of bilateral phlebitis of the spermatic veins and slight pulmonary embolism following inginal herniotomy. He summarized twenty-five cases in the literature with twenty-five others briefly mentioned and seven cases of femoral phlebitis. The mortality in twenty-five cases of which the details were known was fifty per cent. He states that embolism is usually tardy with sudden onset, and generally with hemoptysis. If phlebitis develops in the spermatic vessels the region must be immobilized and he suggests that embolism might be avoided by injections of hirudin in the spermatic veins

high up. In urgent cases he does not hesitate to ligate the femoral and iliac veins for the prevention of embolism.

According to Trendelenburg, quoted from Meyer, coagulation of the blood and recurrence of embolic accident can be avoided by injections of hirudin. Trendelenburg's assistants, Rimaun and Wolf, investigated the problem and found that 1 mg. of hirudin prevents the coagulation of 5 cc. of blood for four and one-half hours. This would mean for a patient of average weight, 1 gm. about 15 grs.; a rather expensive procedure as the cost of 1 gm. is about \$20.00. The drug injected intravenously in large quantities proved harmless.

Some surgeons recommend the excision of varicose veins previous to operation, thus eliminating as far as possible a fertile field for the formation of an embolus.

Trauma to tissue and infection must play an important part in the formation of embolus, since both, depending upon the extent and severity, cause thromboses in venous trunks and plexuses, the veins, more thin walled and less resistant than the arteries, usually being affected. The more thrombus formation present, the more chance there is of a piece being broken off and carried as an embolus to the lungs. Neoplasms and any condition which cause a congestion or slowing of the blood streams in veins and venous plexuses must favor thrombosis.

A large percentage of cases of pulmonary embolism die within a few minutes after symptoms appear and the time between the first appearance of the symptoms and death is so short that little can be done.

When death does not follow immediately, the patient should be elevated so as to favor respiration. There should be plenty of fresh air and even oxygen inhalations may be given.

Venesection has been recommended for dilation of the right heart. Hot water bottles may be applied to the extremities for the failure of the peripheral circulation.

Rapid stimulation with caffeine, camphor, strychnin, also ammonia, ether and brandy hypodermatically may be used. Morphia can be given in doses sufficient to counteract shock and relieve pain, which is often present.

Most authorities divide pulmonary embolism into three groups:



Group 1, in which there is immediate death occurring when only a small portion of the pulmonary circulation is obstructed.

Group 2, in which death follows within a few minutes after symptoms appear and is due to more or less blocking of the pulmonary circulation.

Group 3, in which death is delayed hours and in some cases two or three days, and is the result of an increase by thrombosis, of a blockage of a portion of the pulmonary circulation, starting with an embolism.

Mann was able to produce death experimentally in animals only by a more or less complete blocking of the pulmonary circulation. He states that it was impossible to produce death or seriously endanger the animal's life unless the pulmonary circulation was greatly obstructed. He also used animals with much depressed circulation, subjected to hours of anesthesia, dogs practically moribund with distemper, under local and general anesthesia, and dogs that had been starved.

Trendelenburg, quoted by Meyer, thinks that about 50 per cent of cases of pulmonary embolism have only one branch of the pulmonary artery obstructed at first, and may live for an hour. This type of case he considers suitable for his operations in which the clot is removed from the pulmonary artery. The operation is described in detail by Meyer. Exposure is obtained by a horizontal incision 10 cm. in length over the second left rib. The inner end of this incision is crossed by a perpendicular incision, starting just below the sterno-clavicular articulation, passing the third rib cartilage about one inch outside the sternal border, avoiding the internal mammary artery. The second rib and cartilage are cleared from the field of operation and the third cartilage is divided.

The pleura is opened with an incision corresponding to the outer incision. The pericardium is exposed and opened with an incision inside the phrenic nerve and vessels at the level of the third rib. With Trendelenburg's special sound, a rubber tube is passed through the transverse sinus, and around the ascending aorta and pulmonary artery. The assistant pulls upon these for compression just before the artery is opened. The artery is opened about one-half inch longitudinally, and special curved forceps are used to remove the embolus. Not more than forty-five

seconds can be consumed while opening the vessel and removing the clot, since the interruption of the circulation is not borne longer.

With special forceps, the edges of the vessel wound are lifted and closure made temporarily with a clamp. The elastic compression may now be released, and the circulation re-established. The vessel wound is closed with interrupted silk sutures.

Trendelenburg's assistants, quoted from Meyer, found that the aorta and pulmonary artery could be compressed only forty-five seconds, but the vena cava could be compressed for six to eight minutes with no serious consequence.

Lawen and Sieves, working in Trendelenburg's clinic, made experiments on rabbits. They found that with simultaneous constriction of the pulmonary artery and aorta, the heart and brain suffer most. The heart is more resistant and adapts itself more readily to changed conditions. The heart can stand simultaneous constrictions of the pulmonary artery and aorta for six minutes. The animals tolerated this without apparent injury for one minute. By releasing the constriction for a short time and reapplying more time can be consumed. The heart tolerates constriction of the large veins better than its after the vena cava has been constricted for nine minutes, but irreparable disturbances had occurred in the brain. Rabbits were able to tolerate, without apparent injury, constriction of the large veins for three or four minutes.

Jeger, working with this information, by compressing the two veins, found that he could leisurely open the vessel and remove the clot. Incision of the pulmonary artery brought immediate relief to the distended right heart.

Trendelenburg removed a strip of lung 15 cm. long by 1 cm. thick from one calf and passed it through the jugular vein onto the left branch of the pulmonary artery of another calf. The animal rapidly recovered after the removal of the artificial embolus.

He and his assistants have done this on human subjects and one case lived several days, but finally died of pneumonia. He has never had a recovery after this operation.

Ritzman found that from numerous experiments on cadavers this operation from an anatomic standpoint was practicable. He mentions

the difficulty of operative procedure on account of failure to recognize the complication in time.

#### ANALYSIS OF CASES AT MAYO CLINIC

The cases of post-operative embolism occurring at St. Mary's Hospital, Rochester, covering the period from the opening of the hospital in September, 1889, to and including December, 1911, were reported by Wilson in 1912.

From 1889 to and including 1911 there were approximately 57,000 major operations with forty-seven fatalities from post-operative embolism.

Autopsies were performed on forty-one of forty-seven fatalities and the diagnosis was confirmed. In the remaining six the clinical diagnosis was quite positive. The total number of deaths in the hospital for the period concerned was 864. The mortality from embolism based on 63,573 operations was 0.07 per cent, or one death in every 1,352 operations.

Cerebral and pulmonary embolism were considered in Wilson's report, but only pulmonary embolism is considered in this report. Only thirty-six of Wilson's cases were pulmonary embolism, of the remaining, ten were cerebral and one coronary.

In twenty-eight of the forty-one cases posted, the location of the original thrombus was found in the field of operating or femoral vein.

Wilson thought that following operation on the blood vessels, alimentary canal, and genito-urinary organs, from 1 to 2 per cent of all cases give more or less distinct evidence of emboli, 70 per cent of which are in the lungs of cases that come to autopsy. He states that about 80 per cent can be determined as venous in origin, 10 per cent cardiac, and 10 per cent scattered or undetermined.

From the year 1912 to 1920 inclusive, there occurred at the Mayo Clinic 104 cases of post-operative embolism. Infarcts were not included; only cases of gross embolus or thrombosis in the pulmonary artery were accepted. Of the 104 cases, five recovered; the clinical symptoms being sufficient to warrant a diagnoses of pulmonary embolism. There were several other cases, not included, in which the symptoms were very similar to those found in pulmonary embolism, but the symptoms presented would not justify a diagnosis of embolism. Autopsy was performed on

ninety of the ninety-nine cases that died, and the diagnosis was confirmed.

In this period there were performed at St. Mary's and Colonial Hospitals, 125,163 operations. This includes the last four years of operations performed at the Colonial Hospital. Pulmonary embolism occurred once in every 1,203 cases operated upon, or a percentage of 0.08 per cent. In this period there were 104,360 patients operated upon. Of these 60,755 were females and 43,605 were males. There were seventy-three cases of embolism among females, or an occurrence of one in every 832 women operated upon. There were thirty-one cases among males, or an occurrence of one in every 1,406 men operated upon. In this period there were 2,654 deaths following operation. Ninety-nine cases of embolism were fatal, or one in every twenty-six deaths or 3.7 per cent. The oldest of the 104 cases of pulmonary embolism was eighty-two years, and the youngest six years. The shortest time between operation and death was six hours. The average time between operation and death was ten days. In thirty-three cases the time between the first appearance of symptoms of pulmonary embolism and death was recorded. Eleven of the thirty-three cases lived more than an hour after symptoms developed. One case lived three days, one lived one day, and two lived twelve hours. Most of the cases lived only ten to thirty minutes after the appearance of symptoms.

#### VESICO-VAGINAL FISTULA. ITS OCCURRENCE AND TREATMENT

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Urinary fistulae, especially those of the vesico-vaginal type, are among the most distressing and pitiable diseases of women. They are also of fairly common occurrence and their frequency, coupled with the urgency of treatment and the large number of failures to relieve the condition, make the subject of vesico-vaginal fistula and its treatment of very special importance to every practitioner. In this paper I therefore propose to bring before you a general review of the subject with especial reference to the different methods of treatment and their indications.

Vesico-vaginal fistula may originate first from



obstetrical and puerperal conditions, viz.: long-continued pressure of the presenting fetal part on the soft tissues in impacted labors; or faulty obstetrical technique such as the handling of forceps or other instruments or from the fingers; under this heading also might be included manipulations connected with abortion. Fistulae of non-puerperal origin result from infectious, malignancies in the genital tract, bladder calculi, syphilis, abscesses, etc. They may also originate from direct traumatism, from foreign bodies such as pessaries in the vagina, from procidentia uteri and the like.

Fistulae, following as sequelae of operations in the vaginal and pelvic region, are those of most common occurrence. They may result from faulty drainage, from excessive curetting, from hysterectomy, from operations for fibroids, and also as an effect of the use of radium in genital tract malignancy. It is said for instance that urinary fistula follows in 6 per cent. of Wertheim hysterectomies.

J. Marion Sims,<sup>1</sup> one of the early writers on vesico-vaginal fistula, in 1852, attributed the condition especially to tedious labor, and thought that it could be avoided by instrumental delivery. Better obstetrics have as a matter of fact greatly diminished the number of obstetrical vesico-vaginal fistulae and they are more common now following gynecological operations. Sampson,<sup>2</sup> in 1904, reported 19 vesico-vaginal fistulae following 158 hysterectomies for cancer of the cervix at the Johns Hopkins Hospital; and Judd,<sup>3</sup> reporting in 1920, states that 61 per cent. of the cases of vesico-vaginal fistula operated on at the Mayo Clinic since 1908 were the result of some surgical operation and only 39 per cent. followed childbirth.

Although a urinary fistula may start from the ureter, bladder or urethra, in this paper I will limit myself to those originating from the bladder, that is the vesico-vaginal fistula proper which connects the bladder directly with some part of the vagina. The fistulous opening in the vagina connecting it with the bladder is usually either in its middle or upper third. The middle third of the vaginal anterior wall is in contact with the trigone of the bladder and the upper third with the base of the bladder.

In considering the nature of the fistulous tract it should be remembered that the bladder has a submucosal as well as a mucosal coat, but that the vagina has no submucosal coat.

Normally there is a thick layer of fascia between the bladder and vagina which is intimately connected with the walls of both organs but is easily separated from them. Damage to this layer during surgical or obstetrical manoeuvres may cause a slough or fibrosis which extends into the mucosa of both bladder and vagina uniting them and setting up a fistula. The fistular vaginal orifices following gynecological pelvic operations, especially hysterectomy, are generally situated high in the upper third of vagina. The tract is rigid and sclerous, fixed by adhesions, and is not easily brought down to the vulva.

Vesico-vaginal (and vesico-uterine) fistulae may be traumatic, spontaneous, or surgical.

Traumatic fistula is rare and results from penetrations of the vesico-vaginal septum by a pointed body.

Spontaneous fistulae may follow cancer of the uterus or bladder; or may be of inflammatory nature following calculous cystitis, tuberculosis, or ulcerations of vagina. But the most frequent cause is difficult parturition especially due to severe pressure of the fetal head on the soft tissues, particularly the layer of fascia lying between the bladder and vagina.

Vesico-vaginal fistulae of the surgical type may result either from deliberate gynecological operations, involving the vagina and bladder, or may be the result of an accident or a fault in the execution of an operation in the female pelvis. These occur more usually in the course of a vaginal hysterectomy especially in freeing the cervix. Although different types of fistulae may result from such operations the vesico-vaginal is the most frequent.

Sometimes the fistula is so small that it is difficult to find it, especially if situated in the fold between cervix and bladder; at other times the fistula may measure two or three centimeters in diameter; there may be one or several fistulous tracts. In very extensive fistula a large part of the bladder floor may be absent altogether.

The effects of the constant escape of urine are irritation of the vaginal wall which becomes inflamed and encrusted with urinary calcareous salts and deformed; the bladder may become infected and its wall sclerous; the inflammation and infection may even involve the ureters and kidneys; or the vaginal infection may extend to the uterus which also becomes ulcerated and sclerous.

Escape of urine by the vagina is the only early symptoms of vesico-vaginal fistula, the quantity of urine escaping depending upon the size and situation of the fistula, varying according as the fistula is high median or low. Thus the urinary escape may be continuous or intermittent according as the patient is standing, sitting or lying down. The vagina and vulva irritated by the constant escape of urine become ulcerated and erythematous.

Diagnosis of an urinary fistula is easy; but it is not always easy to locate its exact site and nature; incontinence alone may be urethral or vesical in origin. In most cases cystoscopy will be possible and in large fistulae this method of examination may be essential.

If the vaginal fistular orifice is not apparent on minute inspection, a colored fluid or milk can be injected into the bladder and its escape into the vagina will reveal the vaginal fistular orifice. The patient should be in the Sims knee-chest position with the posterior wall of the vagina retracted.

A urological examination through the cystoscope is highly desirable before planning any operative measures for the relief of vesico-vaginal fistula. By it the position of the ureters can be determined, also the condition of the bladder wall and the site of the fistular opening in it. The surgeon should have as exact a knowledge as possible of all the conditions.

Spontaneous recovery of a urinary fistula may occur within a few weeks of its production but is rare. Frank<sup>4</sup> thinks that the reason why some fistulae heal spontaneously is that the bladder in such cases is free to contract and that the broad tissue planes are mobilized. Also that when free mobilization of the bladder can be effected the fistula will heal.

A small, uncomplicated, fistula in the early stages may be successfully treated by the high frequency current passing the electrode through the fistulous tract and cauterizing it.

But the general rule is that for established vesico-vaginal fistula some surgical operation is imperative. The surgical treatment may be carried out through the vagina or through a suprapubic or laparotomy incision. Generally the vaginal route of approach is preferred whenever the conditions permit treatment through this route with a promise of success, especially when the fistular tract in vagina can be brought down

to the vulva. The consensus of the best surgical opinions today seems to be that when a fistula is simple and small and situated low down well away from the uterus the vaginal route should be selected. The fundamental difficulties met with in the treatment of any established vesico-vaginal fistula are the septicity of the vagina and inaccessibility to the fistula. Hence the desiderata in all such cases are to operate in aseptic conditions and to have an easy route of approach so as to entirely dissociate the mucosa of the vagina from that of the bladder.

The first successful operation for vesico-vaginal fistula in the United States is stated to have been performed by Hayward of Boston<sup>5</sup> in 1839; he emphasized the necessity for separating the bladder and vaginal walls. Mettauer<sup>6</sup> and Jobert<sup>7</sup> reported successful operations in 1847. Sims in 1852<sup>1</sup> introduced a new method of exposure, making an oblique marginal denudation especially of the vaginal aspect of the fistulous tract and directly closing the vaginal wall by non-penetrating sutures of fine silver wire preferably. Sims also used the self-retaining catheter; his idea in making a wide denudation of the fistulous tract and suturing between through the vaginal mucosa and fascial layer was to relieve the bladder mucosa of all tension. Most of the early methods depended upon direct approximation of the edges of the fistulous opening in the vagina.

Successful surgical treatment of vesico-vaginal fistula depends upon the complete dissociation of the lining membranes of the bladder and of the vagina and restoring both to their independent anatomical position. All operative procedures must therefore have as their basis complete separation of the bladder from the vagina and separate closure of the orifices in both. This is not always possible vaginally.

The earlier operations too often failed to prevent recurrence of the fistula. This, as Judd<sup>3</sup> has remarked, was probably due to the apparent ease with which a vesico-vaginal fistula could often be closed. Attempts were made to close the openings before thoroughly dissecting the bladder wall well away from the vaginal wall and separately turning in the mucosa of the bladder and of the vagina well within these organs.

Within the past couple of decades a great number of improvements in the technique of the operation were made especially by Kelly, Macken-



rodt, Mackenzie, Ward, Judd, C. H. Mayo and others. Only a few of the leading methods can be referred to as it would need a text-book to describe them all.

The main principle in all these more modern operations is to completely dissect the vaginal wall from the bladder wall, and to close the vaginal and bladder fistular orifices separately.

For the treatment of important vesico-vaginal fistula the Kelly<sup>8</sup> and Mackenrodt<sup>9</sup> methods of mobilizing the posterior bladder wall were much in vogue for a long time and are still employed. In Kelly's method the posterior wall of the bladder was attached anteriorly to the denuded wall of vagina. Mackenrodt completely mobilized the base of the bladder from its vaginal and uterine attachments and separately sutured the vesical and vaginal margins of the fistula. For very extensive defects the uterus was used to occlude the openings in the bladder and vaginal walls.

Howard A. Kelly,<sup>8</sup> in 1902, introduced the transverse incision in the wall of the vagina opening into the peritoneal cavity. This facilitated the separation of the vaginal and vesical walls in difficult cases; the fistular orifices were closed at right angles to each other. C. H. Mayo,<sup>12</sup> as an improvement in the vaginal operation, suggested inverting the fistulous tract into the vagina by sutures drawn through the urethra and closing the fascial layer over this point.

Watkins<sup>13</sup> favors the vaginal approach and thinks that a thorough dissection of the anterior vaginal wall always gives a good exposure and supplies a maximum amount of mobility and conservation of tissue.

For the extensive case in which the destruction is great with loss of fascia and there is no hope of direct closure of the fistulous gap some plastic or split-flap method must be employed. I have already alluded to Kelly's and Mackenrodt's methods of utilizing the exposed posterior wall of bladder.

There are various other split-flap occlusion methods or tracheloplastics such as used successfully in a recent intractable case by Sturmndorf.<sup>14</sup> Anterior or posterior vaginal wall flaps or both can be used in such cases. Plastic methods using strips of healthy vaginal mucosa are greatly in favor at the present time. Corscaden<sup>15</sup> says that when the uterus has been removed the rectal wall may be used to close a fistula.

Mackenzie<sup>10</sup> favors two free lateral incisions in the perineum, lateral episiotomy wounds, as making the dissection of the bladder from the vagina easier. He thinks this method facilitates bringing the cervix and fornix into full view in the operative field.

Both Judd<sup>3</sup> and Mackenzie<sup>10</sup> after dissecting the bladder from the vagina completely remove the fistulous tract and close the orifices without however incising the peritoneum. Judd says that in the Mayo Clinic plastic methods are generally employed. Proper inversion of the mucosa is of primary importance.

Mayo and Walters,<sup>16</sup> reporting in 1924 on the method followed in executing a vaginal operation for closure of important vesico-vaginal fistula, state that a transverse incision is made between the fistula and urethra. That part of the vaginal wall which contains the fistula is dissected free from the bladder wall down to the fistulous tract. The bladder is then incised at the periphery of the fistula and a circular dissection made of the fistulous opening in the bladder. This leaves the fistulous part of the bladder attached to the vaginal wall. The opening in the bladder is closed by two rows of sutures placed vertically. Then by removing a triangular portion of the vaginal wall, which includes the fistulous tract, it is possible to close the incision horizontally in the wall of the vagina approximating its lower edge (from which the wedge has been removed) to the upper edge of the primary incision. In this way the intact part of the vaginal wall forms a patch over the suture line in the bladder just as the omentum does over an intestinal suture line. Suture of the bladder and vaginal walls in several planes is recommended.

Spalding<sup>17</sup> obtained excellent results by dissecting the bladder entirely free from the anterior wall of vagina, separating the bladder from the anterior wall of the uterus, closing the fistula with either continuous or interrupted catgut sutures, dissecting the pelvic fascia from the mucosa of the anterior vaginal wall and overlapping it with interrupted mattress sutures as in the cystocele operation.

Operations through the vagina may fail or may be impossible when the fistula is situated very high in the fornix, which is more usual after surgical operations; or when the vagina or bladder is held tenaciously in scar tissue, making denudation and mobilization extremely difficult

or impossible. In such cases incision through the symphysis pubis, or a transvesical operation or a transperitoneo-vesical operation is indicated.

Such methods are also indicated when the cervix has been amputated, when vaginal operations have failed to cure, or when the cystoscopic examination shows that a vaginal approach would be very dangerous on account of close vicinity of the fistula to the ureters.

In 1890 Trendelenburg<sup>18</sup> introduced his method of suprapubic incision and exposure in cases of high-situated fistula difficult to approach through the vagina. Paris and Francey<sup>19</sup> are also identified with the suprapubic method of approach.

By the suprapubic route it may be possible to make an intravesical repair of an inaccessible fistula as reported by Kerr.<sup>20</sup> This route not only permits invagination of the fistula but of the organs which constitute it, which moreover can be completely separated from each other in full light.

Schuchardt in 1893 had recommended deep para-vaginal incisions similar to MacKenzie's lateral incisions in order to obtain better exposure in the same class of cases.

Forgue<sup>21</sup> in 1906 treated a case of difficult vesico-vaginal fistula by a transperitoneo-vesical approach but did not cure his patient. Legueu<sup>22</sup> in 1914 perfected the technique of this abdominal intraperitoneal method of treating vesico-vaginal fistulae. Legueu claims that the intraperitoneal operation gives every security for reunion; a perfect and easy closure of the bladder is effected and the adaptable peritonization obviates recurrence which is frequent after extra-peritoneal operations. The objection of possible infection can be guarded against by proper precaution and protection of the operative field.

All vesico-vaginal, fistulae must be considered as operable as long as the bladder sphincter muscle is intact or capable of being repaired. If not, some method of diverting the urine to the intestine must be employed. Colpocleisis or closure of the vagina and the conversion of the vagina and bladder into a common receptacle for urine and uterine discharges is to be considered only as a last resort in the treatment of unusual types of urinary fistulae.

Petersen<sup>23</sup> in 1916 in some cases in which the vesical sphincter was too extensively damaged for repair successfully substituted the rectal sphinc-

ter for discharging the urine and feces and menstrual fluids through the rectum.

Another interesting method is that suggested by Dowman<sup>24</sup> in 1920 of utilizing the posterior surface of the uterus (after removal of tubes and ligaments) for closing the fistula. The anterior wall of the bladder was sutured to the posterior wall of the uterus. The peritoneal surface of the uterus was opposed to the mucosal covering of the bladder. The vaginal orifice was closed by a vaginal operation.

Several other writers have used the uterus for closing the vaginal orifice of a vesico-vaginal fistula. Schroeder<sup>25</sup> has described several extensive fistula closed by this method.

Sometimes a combined abdominal and vaginal operation may be indicated.

Kehrer<sup>26</sup> in the case of a very extensive obstetrical fistula of the anterior vaginal wall, which reached to the symphysis pubis and was adhered to the pubes, made a low median abdominal incision and penetrated into the space of Retzius. He then completely isolated the bladder from the pubes and other adhesions. The second part of the operation was performed through the vagina by dissection of a perfistular sleeve of para-vaginal tissue.

Whatever procedure is followed it is highly desirable that the site of the fistula should be peritonized whenever possible. Solms<sup>27</sup> uses the vesico-vaginal peritoneum for this purpose. Klumper<sup>28</sup> sutures a strip of omentum over both bladder and vaginal orifices. Peritonization is easy with the abdominal methods.

In regards to the results obtained from operation, Judd<sup>3</sup> states that in 78 patients operated on by various methods in the Mayo Clinic for vesico-vaginal fistula there was no operative mortality. Fifty-six of these were followed: 4 experienced no benefit; 6 were improved; and all the others were cured.

Sixty-eight per cent. of these patients had previously been operated on from one to seven times, and in many cases several operations had to be done at the Clinic.

Frank<sup>4</sup> states that of 19 patients operated on at the Mt. Sinai Hosp., N. Y., 5 were not cured; but of these four had previously been operated on from one to six times. One of MacKenzie's<sup>10</sup> patients had 18 operations for the condition before coming to his service.

The suprapubic or abdominal operation gives



good results, but as there is a liability to infection these methods should be avoided unless strictly indicated by the conditions. Francey<sup>29</sup> who collected the reports of 33 transvesical operations found that there was a satisfactory result in 60 per cent. These are usually difficult cases which previous surgical attempts failed to cure.

Generally speaking operative methods should give a cure in at least 75 per cent. of the cases.

The only serious post-operative complications likely to arise in dealing with vesico-vaginal fistulae are injury to or incarceration of one of the ureters, with consequent urinary retention or perforation of the peritoneum, and possible resulting septicemia.

A word should be said in regard to the pre- and post-operative care of vesico-vaginal patients. Where there is much excoriation with calcareous deposits in the vagina and vulva these patients must have a preliminary treatment for the correction of such conditions. This may need from a month to six weeks.

Post-operative care is particularly important. Corscaden,<sup>15</sup> Chute<sup>30</sup> and others recommend that following operation the patient should be kept in the prone position for at least a week. The prone position helps to keep the weight of the urine and of the intestine from pressing on the line of sutures. It is generally recommended to pack the vagina to prevent tension.

Opinions differ in regard to catheterization. Some, such as Chute and Mayo, recommend the retention-catheter, Caulk<sup>31</sup> recommends suprapubic drainage after vaginal repair of the fistula as it keeps the bladder at rest and thoroughly drained. The in-dwelling catheter is specifically condemned by Sturmdorf<sup>14</sup> and Caulk<sup>31</sup> and these, as well as Hendrick<sup>32</sup> and Spalding<sup>17</sup>, prefer to catheterize the patient every three or four hours. With due respect to these opinions I think that there are some operated cases in which the indications will be for a permanent catheter. The experience gained from my personal cases leads me to the opinion that when a spontaneous healing may be expected in a recent or fairly recent case the employment of a permanent catheter will give the patient an excellent chance by keeping the bladder empty and the fistulous tract free from constant urinary irritation.

If a retention-catheter is employed it should be removed frequently and cleaned.

In conclusion, the points to be emphasized in the treatment of vesico-vaginal fistulae are: (a) thorough preoperative cleansing of the vulva and vaginal tract; (b) a cystoscopic examination of the patient; (c) selection of a vaginal or transvesical approach to the fistula according to the nature of the conditions found; (d) complete dissection of the bladder from the vagina; (e) inversion of the mucosa in each organ and closure in multiple suture layers; (f) careful post-operative supervision of the patient especially as regards catheterization.

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## THE EFFECT OF RADIUM IN CHRONIC PASSIVE CONGESTION OF THE POSTERIOR URETHRA

LEO C. DuBois, M. D.

CHICAGO

Chronic passive congestion of the posterior urethra and the sequelae arising from this condition have attracted the attention of urologists ever since the urethroscope came into general use, with the result that many observers have made special attempts to clear up the many confusing ideas and statements which have found their way into the literature bearing on this subject.

Our attention was directed particularly to the forms of chronic passive congestion of the posterior urethra resulting from and following acute inflammation of the urethra due to gonorrheal or occasionally other forms of infection as well as to the forms in which no history or evidence of infection is present.

Any condition which causes repeated attacks of passive congestion, as sexual excitement without intercourse, or with improper or incomplete intercourse, any condition which brings an increased blood supply to the posterior urethra, and which does not carry away that blood in a normal way or period of time—these conditions may eventually cause a chronic passive congestion of that area. The anatomical result is easily comprehended when we recall the fact as stated by Young<sup>1</sup> in his *Practice of Urology* that “the verumontanum itself is supplied with many blood vessels, lymphatics and nerve endings. During sexual excitement it becomes greatly congested, and this condition may become practically permanent in certain cases of sexual neuroses, especially those associated with premature ejaculation. It is doubtful whether this is the cause or the result of the sexual abnormality. As a result of inflammation of long-continued treatment with caustics, the verumontanum may be converted into a mass of scar tissue. No constant relation between these conditions and sexual symptoms have been definitely established.”

A series of fifty cases was studied with a view of determining the underlying pathology upon which suitable treatment could be based. The material consisted of nine cases following gonorrheal or other acute infection, and forty-one cases in which no definite cause could be deter-

mined. All of these cases were first treated by the usual methods, either by ourselves or the referring physician, with no improvement. No case showing infection of any kind is treated by radium. Complicating conditions, as stricture of the urethra, folliculitis, a marked prostatitis or seminal vesiculitis, should be cleared up before attempting the use of radium.

The underlying pathology in the two types is essentially the same, and consists of two general divisions, which blend more or less.

1. *The stage of increased activity.* Of this stage Wolbarst<sup>2</sup> says, “Soft infiltration is the most frequent lesion encountered. The mucosa is hyperemic, congested and bleeds easily on the slightest contact. The veru is dark red, swollen, and increased in size. It takes on a smooth appearance and becomes distorted in shape. It is quite customary to find the mucosa markedly swollen and manifesting itself in the form of bulbous edema, concentrated more or less and bleeding easily.”

2. *The stage of diminished activity.* Of this stage the same author<sup>3</sup> says, “The posterior urethra is seriously altered in hard infiltration. The membranous region takes on a grayish red, slightly yellowish, color, its brilliant luster disappears and gives place to a dry and dull appearance. The epithelium desquamates freely, so that it may be denuded over a very considerable extent, this desquamation being responsible for the bleeding which is easily produced by the introduction of the urethroscope. Vegetations and polypi are frequently found on the veru or some portion of the posterior urethra. Not infrequently their existence coincides with neurasthenic phenomena of an extremely marked type.”

*Symptoms:* In conditions following venereal infection we have persistence of shreds, burning, frequency, itching, and all the symptoms which are so familiar to urologists. In conditions which do not follow infection, as well as often in those that do, the most striking symptoms are related to sexual activity.

In the first stage we find increased sexual excitability, nocturnal emissions, premature ejaculations—all the symptoms of an increased irritability of the sexual center. As the condition becomes more chronic, as the pathology changes from the first stage to the second, we get the history of diminished libido, difficulty in getting an erection, or inability to get complete erection,



increasing difficulty in having sexual intercourse, until, finally, absolute loss of sexual power.

The pathological findings suggested a form of treatment which has not been used as widely as it should. The condition under discussion has usually been treated by topical applications of silver nitrate, passage of sounds with deep instillation of weak silver, or some similar method, but the results have been notoriously uncertain and unsatisfactory in many instances. This led us to attempt the use of radium in the hope that it is particularly suitable in cases where there are structural changes in the mucous membrane and its blood supply. The effect of radium on such tissue is particularly selective. It is known that small doses of radium are stimulating to normal tissue growth. Likewise it is known that radium in larger doses has a destructive action on tissue, to which action devitalized cells are more sensitive than cells of normal vitality. In the treatment of indolent ulcer with radium it has been found that, under proper dosage, the devitalized superficial tissue has been destroyed and a secondary stimulation of healthy tissue underlying the indolent superficial membrane occurred, allowing the ulcer to heal. It is logical to believe that in cases of long-continued passive congestion of the posterior urethra the superficial membrane is not the well nourished, healthy cell layer that normally exists. So with these experiments in mind, with the knowledge of the action of small doses of radium on membrane, it was hoped that in the posterior urethra, with its unhealthy membrane, we could get a beneficial effect by the use of stimulating doses of radium.

It has been found experimentally that 50 milligrams of radium, screened as we have used it, applied to skin for one hour, shows practically no inflammatory reaction. The same dose applied to buccal or rectal mucous membrane reveals, on cross section of tissue examined from four to twelve days later, a slight low grade inflammatory reaction. On the theory that the posterior urethra is covered by a membrane somewhat more sensitive still, we decided on the dosage of 50 milligrams of radium used for one hour as the proper amount to get the desired effect.

*Method of Treatment:* Fifty milligrams of radium with 1.4 mm. gold, .8 rubber screening, are placed in a posterior urethral applicator,

sound-shaped. After a local anesthetic, as procain 2 per cent, has been left in the urethra for ten minutes, the applicator is introduced into the urethra until the tip, with its radium content, rests in the posterior urethra. The applicator is then fixed and held in position for one hour, giving the patient 50 milligram hours of radium. In a number of cases 100 milligram hours have been used with no untoward effect, either immediate or remote. If proper anesthesia has been obtained there is usually no complaint by the patient—occasionally slight spasm of the sphincter toward the close of the period. The patient is directed to have no sexual excitement for six weeks and to return at the end of that time for examination.

The results in our series have been highly satisfactory. We have communicated with or personally interviewed nearly all of the fifty patients at variable periods of time up to four years after treatment. Eighty per cent. report a complete return of sexual function and loss of symptoms complained of, and urethroscopic examination in these patients revealed, at the end of six weeks, a normal appearing membrane, with normal verumontanum, no granulations, bleeding or other pathology, and examination at various periods later, in the majority of these cases, showed a continued lack of pathology. Two cases in this series required a second treatment with radium, with satisfactory results and findings after the second application. Six cases required from one to four after-treatments with silver nitrate to obtain completely satisfactory results, but these cases reacted to silver after the use of radium, whereas before silver had no apparent effect on the condition. Two cases did not return for re-examination and have been lost track of.

In the cases where urinary symptoms were present, results were concurrently satisfactory. Shreds, which had persisted for months, disappeared; burning, frequency and itching cleared up and the urine became normal in appearance.

We cannot tell at present whether all these cases are permanent recoveries or are undergoing temporary improvement over comparatively long periods of time. We do know, however, that over these long periods of time we have obtained results both symptomatically and anatomically which we have been unable to approach by means of any other kind of treatment.

The treatment appeals to the patient; there is no severe local reaction such as follows the application of silver—no local reaction of any kind noticeable to the patient in the vast majority of cases.

*Conclusions:* 1. Radium has been employed in a series of fifty cases, comprising nine post gonorrheal and forty-one with no history of infection.

2. These patients were observed for a variable length of time up to four years after the treatment.

3. The effect of this form of treatment was highly satisfactory and resulted in forty functionally perfect results, eight of which showed marked improvement, two lost track of and results unknown.

4. Only one application is necessary in the vast majority of instances.

104 S. Michigan Ave.

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### UNRESOLVED PNEUMONIA OF UNUSUALLY LONG DURATION\*

ARTHUR H. R. KRUEGER, M. D.

CHICAGO

Mrs. O. L., aged thirty years, always healthy except during her first pregnancy when she developed post partum convulsions from which she recovered. During her second pregnancy she had heavy deposits of albumin in the urine but gave birth to a healthy boy and recovered fully from the albuminuria.

*March 3* (Saturday) she was taken with severe pains in the back and all joints, headache, coryza with severe sore throat; temperature 100.2 F.; pulse 88; respiration 24. She had slight cough and physical examination showed a few dry rales scattered over the chest.

*March 4* (Sunday) and *March 5* (Monday) she felt better and contrary to orders to stay in bed went to the basement to do the week's washing.

*March 6* (Tuesday) I was again called and told that patient had had a severe chill lasting

forty minutes, with a sharp cutting pain in the left side of the chest especially increased by cough. Her temperature was 104.2 F.; pulse 116; respiration 32. There was no red tinged expectoration, no pleural friction. The only physical signs present were a few clicking rales over the whole chest but in the lower left lobe in the anterior axillary line a distant blowing breathing and rales were recognizable. Gradually day by day this area increased until by the fourth day (March 10) the lower left lobe was consolidated with all the signs of a lobar pneumonia. The temperature, pulse, and respiration remained high throughout the course but after two days (March 12) the temperature increased to 105 degrees, pulse 120, respiration 38 and physical examination showed involvement of the lower portion of the upper left lobe. The temperature went down to 104 degrees the next day (March 13) and remained so till three days later (March 16) when it rose to 106 degrees F., pulse 138, respiration 42. Physical examination at this time showed extension of the process to the whole upper lobe thus involving the whole left side of the lung. There was marked respiratory difficulty due to a sudden pulmonary edema and the patient was very restless so I administered one-fiftieth of a grain atropine sulphate hypodermically: she rallied and the temperature returned to 104°. At the same time she complained very much of pain in her left side and vomited.

Abdominal examination showed marked tenderness and enlargement of the liver to the extent of four finger breadths. She was slightly jaundiced.

Thus far we have the following picture. The rational symptoms of pneumonia were present for several days before the physical signs became distinctive by the advance of consolidation to the surface, in other words the consolidation started as a *central pneumonia*, then gradually and successively advanced from the lower to the upper lobe of the left lung by distinct progressive steps each time accompanied by distinct elevation of temperature, pulse, and respiration. In the following two weeks the course was very stormy but gradually the temperature and pulse came down to nearly normal. However, the physical signs of consolidation persisted. The patient had very much pain in the chest especially over the upper lobe anteriorly and in the

\*Read before the N-W Branch of the Chicago Medical Society, April 14, 1926.



left shoulder. The temperature never reached normal but would be 99, 99.6, 100 or 100.8 F. The pulse ranged from 108 down to 96.

**EXAMINATION OF SPUTUM:** (April 5 and 11) sputum for tubercle bacilli was negative. There was no pus or elastic tissue and cholesterin and hematin crystals were absent.

Many pneumococci, no tubercle bacilli, some streptococci.

*April 12* Dr. John Ritter saw the patient with me and performed a tuberculin test. Careful records of pulse and temperature for the following days proved entirely negative for tuberculosis. The patient continued to improve from day to day, feeling better, coughing less and developing a hearty appetite, but the pain in the chest persisted as well as the pain over the still enlarged liver. Jaundice entirely disappeared, and only a trace of albumin appeared in the urine.

The physical signs, however, persisted. At this time there was lagging of the affected side and increased (compensatory) motion of the unaffected side.

**Palpation:** over the whole left side anteriorly vocal fremitus was increased, but decreased towards the side, and was absent on the back.

**Percussion:** there was marked dullness approaching flatness over the entire front of the left lung. On the back, however, it seemed that with the flatness there was also present a "feeling" of resonance, as if overlying an area of consolidation, i. e. the percussion note was not so marked as anteriorly.

**Auscultation** furnished the most interesting phenomena. In front there was pure bronchial breathing in the upper lobe, but in the lower lobe there were in addition a few scattered small moist rales. Posteriorly, however, the breath sounds were audible as bronchial which had a far distant quality, as though far from the surface. In the foreground, that is, superficially, could be heard very faint vesicular breathing.

Because of the irregular temperature and pulse and marked pain in the chest, together with occasional sweats and a high leucocytosis I was puzzled. Would this develop into an empyema, an abscess, or was there a collection of fluid? Would it terminate in a chronic interstitial or fibroid pneumonia as a result of organization of the exudate and thickening of the alveolar walls,

or was there a greatly thickened pleura? Because of the foregoing physical findings, however, I could not make up my mind to do an exploratory puncture as had previously been thought of, but I assumed that there was a solid lung in the anterior portion of the chest with a beginning narrow zone of aerated lung above it posteriorly.

*April 19*, x-ray examination of the chest was made with the following report by Dr. Edw. S. Blaine:

Occupying the greater portion of the left thorax there is a diffuse shadow density which reaches the lateral chest border from apex to ninth rib posteriorly. Below this smooth, even shadow density are irregular mass shadows having the appearance of calcification of soft structures. The costophrenic angle and the supradiaphragmatic region are slightly aerated as compared with the balance of the left thorax. On lateral projection there is seen to be a clear posterior periphery and a narrow aerated zone anteriorly. The extensive shadow density referred to entirely obliterated the left border of the heart and mediastinum. The heart and aorta are slightly displaced toward the right. The entire right thorax is seen to be normal throughout, there being no evidence of pulmonary or respiratory pathology. Neither is there evidence of pleural changes on right costal or diaphragmatic borders and the right costo-phrenic angle is clear. The heart outline being more or less obscured prevents study of the same.

**RESUME:** In view of the clinical history the non-aerated upper left lung would strongly suggest an unresolved pneumonia in which the consolidation is complete. This is unlike the usual x-ray appearances of the unresolved pneumonia. From the x-ray standpoint the character of the shadow indicates the presence of a considerable amount of fluid material which would be encysted but the shadow lacks the definite border commonly found in a "hanging" empyema. Next in order to be considered is an intra-pulmonary collection of fluid such as a large abscess. There is also a possibility that this most unusual shadow is due to a neoplasm but the absence of proper outlines of same makes this rather doubtful.

It is probable that a follow-up x-ray study may serve to differentiate between the above mentioned possibilities in two to three weeks.

The patient in the following weeks continued to improve symptomatically feeling better and stronger each day and acquiring a healthy appetite. She had little sputum and still complained of much pain in the upper lobe and shoulder of the left side. She also had occasional chills and fever, especially at night. On physical examina-

tion the area of dullness was diminished and a larger area of vesicular breathing was developing; that is, it seemed that the consolidation was gradually diminishing in area.

*May 10* another x-ray examination was made by Dr. Edw. S. Blaine with the following report:

On fluoroscopic screen examination a normal right lung field is revealed. The right diaphragm does not move with the normal excursion but is seen to be clear. The left thorax is occupied by an extensive shadow density which probably represents consolidated lung. There are areas of aeration in the upper median portion, as well as in the lower lung fields. The left diaphragm is readily identified, although the neighboring costo-phrenic angle is obliterated by adhesions and pleural thickening. It is observed that the heart and median shadow is not at all displaced as compared with previous examination. The character of the shadow density is beginning to vary as compared with the first examination which indicates a distinct improvement in the diseased condition.

The patient continued to improve and sat up in a chair for short periods alternating with rest periods in bed.

*May 19* x-ray examination report showed:

The shadow density in the left upper lung is very dense and is due mainly to an enormously thickened pleura which seems to extend over the anterior lung structure. This pleural thickening reaches from apex to approximately the base of the anterior lobe below which the degree of thickening is much decreased. A considerable calcification degeneration is taking place in the left hilum and a rather wide area extends horizontally outwards and forwards. The lower lung is becoming more aerated than was noted previously. The entire right pulmonary field is clear as are also the pleural borders.

After the last x-ray examination improvement in physical signs took place rapidly; the area of dullness became smaller and was replaced by normal vesicular breathing. The liver by this time had become normal and all abdominal symptoms disappeared.

*June 10* the lung was entirely clear so far as physical signs are any guide and the only complaint of the patient was eruptions on the face and a severe alopecia. Dr. Oliver Ormsby made a diagnosis of dermatitis seborrheica of the face. The alopecia was due to the high fever. Treatment for this was sedative and later radio-therapy.

The duration of pneumonia from *March 6* or from the first sign of consolidation physically

(*March 10*) to *June 10* made the duration three months.

Ordinarily the lung is restored to its normal state by liquefaction of the exudate and lymphatic absorption or expectoration of this exudate in a time varying from *eight* to *fifteen* days.

Sometimes the peptonizing action of the leucocytes goes far enough to include the lung tissue itself in its action and produces areas of softening and even *abscess cavities*. Sometimes the affected area may be invaded by Saprophytic organisms of putrefaction especially in diabetes or debilitated states and *pulmonary gangrene* result.

If there is only partial absorption of the exudate, repeated infiltration may take place and a fibroid induration or chronic interstitial pneumonia be the result.

Fortunately these results are rare and the so-called failure of resolution is the more commonly observed deviation from the classical course, and while resolution is unduly delayed it will ultimately take place. Such was the happy ending in my case.

Delayed resolution takes place in *three* to *four* per cent. of cases. *Forty* cases at Johns Hopkins Hospital showed a duration to the *fourth* week of *five* cases, to the *fifth* week of *ten* cases, to the *sixth* week of *four* cases, to the *ninth* week of *three* cases and *eleventh* and *twelfth* week each *one* case.

*The chief interesting points in this case were:*

1. Symptoms of pneumonia present several days before physical signs became distinct by the advance of the pneumonia to the surface.
2. The gradual and successive advance from the lower to the whole upper lobe.
3. Stormy course.
4. The various complicating possibilities with their diagnostic problems.
5. The toxic hepatitis (as I called it) with jaundice. Cases attended by it are always serious.

*Explanations suggested for the jaundice are:*

- (a) Due to a catarrh of the bile ducts.
- (b) Due to a reabsorption of hemoglobin derived from the disintegration of the red blood cells of the exudate in the air vesicles.
- (c) Hemolytic action of the diplococcus lancetatus.



## THE EYE-LASHES SIGN

B. LEMCHEN, M. D.

CHICAGO

In the March, 1925, issue of the *ILLINOIS MEDICAL JOURNAL* I described this sign and stated: in comatose patients when we touch the eyelashes, in organic brain diseases there will be no movements of the eyelids, while in functional diseases there will be a winking like movement of the eyelids. Since I wrote it I have had quite an opportunity to study the sign. While I didn't have the opportunity to study all forms of organic brain diseases I can state that much.

The eyelashes sign is of great value in a negative way. That is, when we see a comatose patient and we touch the eyelashes and there is a winking like movement of the eyelashes, we can rule out organic lesions, and in all probability we are dealing with a functional disturbance like hysteria, epilepsy, catatonia, etc.

While testing this sign I came across another sign which is in touching the lower eyelid in all sudden cortical lesions like hemorrhages, emboli, thrombosis, etc., there is a movement of the upper eyelid opposite the lesion. That is, when the lesion is on the right side of the cortex touching the left lower eyelid there will be a movement of the left upper eyelid, while touching the right lower eyelid there will be no movement whatever. In case the lesion is on the left side, touching the right lower eyelid there will be a movement of the right upper eyelid, while touching the left lower eyelid there will be no such movement.

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## Book Reviews

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**THE MEDICAL CLINICS OF NORTH AMERICA** (Issued serially, one number every other month.) Volume X, Number X, (Boston Number, March, 1927.) Octavo of 311 pages with 34 illustrations. Per Clinic year, July, 1926 to May, 1927. Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

Contributors to this number are Doctors Christian, Crothers, Emery, Fitz, Freedman, Smith, Frothingham, Hill, Isaacs, Jackson, Joslin, Krantz, Lee, Lord, Minot, Morse, Murphy, Ohler, Robey, Root, Crague, Sturgis, Talbot, Ullian, Wearn, Weiss, Franklin W. White, Paul D. White, Priscella White, Wirt.

**THE PRACTICAL MEDICINE SERIES.** General Therapeutics. Edited by Bernard Fantus, M. D. Series 1926. Chicago: The Year Book Publishers. Price

per volume \$2.25. Price of the series of eight volumes \$15.00.

The year 1926 has yielded its proportionate share of useful contributions to therapeutics. In this work the field has been summarized and brought up to date.

**SHOULD WE BE VACCINATED.** By Bernard J. Stern, Instructor of Sociology, Columbia University. New York and London. Harper & Brothers, publishers. 1927. Price \$1.50.

This work covers all aspects of the subject of vaccination. It weighs the validity of the arguments of the antivaccinationists and those in favor of vaccination. Health officers and physicians will find this work of intense interest for it gives a popular, critical historical study of the sociological and psychological factors which have provoked the persistent opposition to vaccination.

**THE TRUTH ABOUT HEREDITY** By William S. Sadler, M.D. Illustrated. Chicago: A. C. McClurg & Company. 1927. Price \$2.50.

This book is a concise explanation of heredity written for the layman. It is a book that every one can understand and should read.

In this work the author has sifted out the correct information on the subject and presents the clear cut facts in a very concise manner.

**SOCIAL FACTORS IN MEDICAL PROGRESS.** By Bernard J. Stern, Ph. D. New York: Columbia University Press. 1927. Price \$2.25.

In this work a list of the multiple inventions and discoveries in the history of medicine is presented in the discussion of the contributions of individuals to medical progress.

**TEXT-BOOK ON DISEASES OF THE SKIN AND SYPHILIS.** By Albert Strickler, M. D. With 218 illustrations, including 6 full page plates, some in colors. Philadelphia: F. A. Davis Company. 1927. Price \$8.00 net.

This work is designed for the use of students and practitioners. It presents to the student and the general practitioner a text book on dermatology constructed on sound, pedagogical principles. The object sought in this volume is, to present pathologic, the clinical and therapeutic facts in a clear and concise manner.

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## Society Proceedings

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### ADAMS COUNTY

May 6, 1927. This was the first meeting of the Council of the Adams County Medical Society and was preceded by a luncheon at the Elks Club at noon and the following were present: Drs. Irwin, Wells, Cohen, McReynolds, Knox, Swanberg, Stevenson and Koch.

Plans for the picnic to be held in June were discussed and it was generally agreed that this meeting should be left entirely in the hands of the Entertainment Committee and the picnic be conducted in the

same manner as last year. The minutes of the April meeting of the society were approved as published in the Bulletin. The matter of drug store newspaper advertising was discussed and a motion carried that the society does not disapprove of advertising of the type that had been submitted by one of the Quincy druggists. Bills for flowers and telegram to the extent of \$4.04 were approved. A motion was carried that no scientific meetings of the society be held during July and August of this year. A motion was carried that the delegate of the Adams County Medical Society be instructed to nominate Dr. C. D. Center of Quincy for Councillor for the Sixth District of the State Society at the coming meeting of the House of Delegates at Moline. A motion was carried that the President and Secretary be instructed to write, in the name of the society, a letter to the societies in this district and other interested parties to influence them to support the election of Dr. Center for Councillor. A motion was carried that the next meeting of the Council be held at the call of the President. The Council adjourned at 1:20 P. M.

May 9, 1927. This was the regular monthly meeting of the society held at the Elks Club and called to order by the President, at 8:25 P. M. Twenty-nine were present, including three guests.

Dr. H. S. Maupin read a paper on "Diphtheria," discussing the value of anti-toxin, Schick test, etc. The discussion was lead by Dr. T. B. Knox, followed by Drs. Cohen, Wells, Bowles, Harris, Nickerson, and finally closed by Dr. Maupin. Dr. Grant Irwin read a very interesting paper on "The Modern Treatment of Hemorrhoids," emphasizing the injection method. The discussion was opened by Dr. A. M. Austin, followed by Drs. Harris, Miller, Williams, Pearce, Nickerson, Jurgens and finally closed by Dr. Irwin.

The minutes of the meeting of the Council held on May 6 were read and a motion was carried that they be received and concurred in.

The meeting adjourned about 10:30 P. M.

HAROLD SWANBERG, M. D.  
Secretary.

### COOK COUNTY

#### CHICAGO MEDICAL SOCIETY

*Joint Meeting Chicago Medical Society and the Chicago Society of Industrial Medicine and Surgery, May 4, 1927*

Symposium on Industrial Health Hazards:

1. The Heart in Industry, George K. Fenn.

Discussion, James Britton.

2. Electrical Shock—Demonstration of Artificial Respiration, Hart E. Fisher.

3. The Nervous Aspect of Industrial Injuries, Wm. B. Fisk.

4. Eye Injuries, Sydney Walker, Jr.

*Program Furnished by Northwestern University Medical School, May 11*

Symposium on Kidneys:

1. Methods Used in Determining Kidney Function, Paul Starr.

2. Nephrosis, William H. Holmes.

3. Renal Glycosuria, Don Sutton.

4. Discussion Opened by Walter H. Nadler.

*Regular Meeting, May 25, 1927*

1. Abnormal Behavior, Source, Prevention and Treatment, Chas. F. Read.

Discussion, Sidney Kuh, Francis Gerty.

2. The Treatment of Contractures with Free Full Thickness Grafts and Pedunculated Flaps, Summer L. Koch.

Discussion, Allen B. Kanavel.

### DE KALB COUNTY

Thursday, May 12, 1927, over eighty people assembled at the innovation for the joint meeting of the De Kalb County Medical Society and the De Kalb County Public Health League.

The two sons of Clarence Palmer and their pals made up a boys' orchestra which played delightfully during the dinner.

W. M. Hubbard, County Superintendent of Schools and President of the Health League opened the meeting, later turning the gavel over to Dr. E. C. Burton, President of the Medical Society.

Dr. G. Henry Mundt of Chicago gave a splendid address on the "Care of the Eyes of School Children." In the pre-school child look especially for inflammatory conditions of the eyes and for cross-eye. Dr. Mundt emphasized the fact that a child allowed to grow up with a cross-eye, grows up with a blind eye or at least a very defective one. A crossed eye should receive attention as soon as it develops and before the child starts to school.

Children with contagious eye diseases should be excluded from schools and if this disease is of a chronic nature, such as trachoma, they should remain away from school until the child and the family are educated to be careful about spreading their disease to others. Trachoma is prevalent in Southern Illinois but not in Northern Illinois.

Continuous close work like sewing and weaving are injurious to the eyes of children up to the tenth or eleventh years. Glary lights are injurious at all ages and lights should be shaded for protection from direct glare into the eyes as well as reflected glare from manuscript.

Myopia or near-sightedness is the most serious of the refractive errors for which glasses are prescribed. It is often brought on by eye-strain in early childhood and if this is found to be progressive the child should be excluded from school and from all close work for one year. Dull slow children often suffer from defective vision or defective hearing and pep up when these are corrected.

Mr. Warren Hubbard spoke of "Health Work in the Schools." The physical directors should be clean in thought and word and deed—good examples for our boys and girls.

Dr. D. B. Penniman of Rockford, the State Medical Society Councilor for this district, was a guest at the meeting. Dr. Penniman spoke of the value of periodic



health examinations. Often a malady in its early stages is discovered at these times and this gives the physician a better chance to remove or cure the condition.

CLIFFORD E. SMITH,  
Secretary.

### HENRY COUNTY

The annual meeting of the Henry County Medical Society was held in the Kewanee Public Library Community room, Thursday May 5, 1927, at 1:30 P. M.

In the absence of President John H. Oliver, who was in California and also the absence of the Vice-President, J. E. Westerlund of Cambridge, who was unable to be present, the meeting was called to order by Secretary P. J. McDermott.

Minutes of the previous meetings and Treasurer's report were read and approved.

Resolutions on the deaths of Dr. D. F. Stewart, Galva, and Dr. George Mickelson of Kewanee were read and placed on record. It was moved and seconded that the President-elect each year of the Henry County Medical Society be Chairman of the Medical Relief in Disaster Committee as formulated by the American Medical Association at the Dallas Session, July, 1926. Carried.

The following officers were elected for the coming year:

President, J. E. Westerlund, Cambridge; vice-president, Robert H. Stewart, Galva; secretary-treasurer, P. J. McDermott, Kewanee.

Business session then adjourned.

At 2:30 P. M. the scientific program was presented. The first paper of the afternoon was given by J. S. Nagel, Chicago, "Some Diagnostic Points in Renal and Bladder Surgery." The doctor had some very fine x-ray films on the above subjects which he exhibited during his talk which proved decidedly interesting and helpful to those present.

The last paper on the program was given by Philip H. Kreuscher of Chicago, his paper was on "Backaches, It's Causes and Treatment." Dr. Kreuscher's paper was illustrated by stereopticon slides showing the spine in health and diseased conditions which was highly instructive.

Dr. Kreuscher stated that after the elimination of bodily deformities such as tuberculosis, rickets, etc., it will be found that 70% of the remaining causes of backache are due to focal infection of the tonsils, teeth or sinuses.

The meeting was well attended in addition to those present from Kewanee, physicians were in attendance from Atkinson, Buda, Galva, Geneseo, Depue, Ladd, Princeton, Sheffield and Wyoming.

P. J. McDERMOTT,  
Secretary.

### MERCER COUNTY

The annual meeting of the Mercer County Medical Society was held on Tuesday, April 12, 1927, at the Oak View Country Club. Members of the county Dental Society were invited as well as the wives of

the members and a moderately good attendance resulted.

The meeting started with a luncheon and this was followed by a business meeting of the society at which the following officers were elected for the following year.

President, V. A. McClanahan, Aledo; vice-president, C. M. Murrell, Sherrard; secretary-treasurer, Joseph Dauksys, Aledo; Censors, Walter Miles, Viola; T. C. Hainline, Seaton and T. D. Coe, Keithsburg.

A paper on "The Proper Relation Between Dentistry and General Medicine" was read by Dr. H. W. McMillan of Roseville.

A paper on "Swellings of the Neck, Mouth and Face" was read by Dr. Wilbur Bowen of Peoria.

A general discussion of both papers followed.

Dr. H. M. Camp, secretary of the State Society, gave a short talk on the general affairs of the organization throughout the state and urged all to attend the state convention.

The meeting then adjourned.

JOSEPH DAUKSYS,  
Secretary.

### OGLE COUNTY

The Ogle County Medical Society met in regular session on the evening of April 28, 1927, at the Malmberg Tavern after an enjoyable dinner for which the tavern is famous. There were 18 members and 21 visitors present.

Motion made by Dr. Kittler and carried by the Society that Dr. Warmolts be elected to fill out the unexpired term of Dr. Kretzinger recently deceased.

It was moved and carried that the President appoint a committee to draw up suitable resolutions in memory of Dr. Kretzinger who had been a faithful secretary of the society for nearly twenty years.

Moved and carried that a bill for \$68.83 which was Ogle County's share of the 1926 Lee and Ogle County picnic be paid.

Moved and carried that the President appoint a committee to act with the committee from Lee County in arranging for the annual picnic. Drs. Kittler, Rochelle; Griffin, Polo; Warmolts, Oregon, were appointed.

The County Nurse, Miss Catherine Greene, gave a talk in which she urged better cooperation between the County Tuberculosis Clinic and the local physicians. Discussion by Drs. Beebe, Beveridge, Kittler, McEachren, Price and Sheets.

Dr. S. S. Winner of the State Department of Public Health talked on "Diphtheria and Scarlet Fever Control." Discussed by Drs. Culhane, Beveridge, Woodward, Kittler and Crawford.

Dr. Maurice Lewison, Professor of Physical Diagnosis, University of Illinois, gave a very practical, interesting and instructive talk on "Treatment of Diseases of the Heart." The amount of information the doctor was able to impart in a short talk, spoke well for his knowledge of the subject. Discussion followed by Drs. Culhane, Murphy, Price, Kittler, Bogue and McEachren.

On motion made by Dr. Kittler, a rising vote of thanks was extended the speakers.

The meeting adjourned to meet again sometime in the summer.

LAMBERTUS WARMOLTS,  
Secretary.

### PIKE COUNTY

The April meeting of the Pike County Medical Society was held in Pittsfield on the 28th.

Thirty-two members and guests partook of an excellent noonday luncheon at the Pittsfield House.

The meeting was held at the Lions Club and the following were elected to office for the coming year: president, O. H. Berry, New Canton; vice-president, W. E. Shashtid, Pittsfield; secretary, F. N. Wells, Pittsfield; delegate, P. H. Dechow, Kinderhook; alternate, W. E. Shashtid, Pittsfield.

An "All Chicago" program was given, with excellent papers by N. S. Davis on "Treatment of Heart Failure"; George Edwin Baxter, "Diarrheas of Infancy," and Edward J. Berkheiser, "Disabilities of the Hip," with especial reference to Whitmans Method of Treatment of "Broken Hip."

The consensus of opinion was that this was one of the very best programs ever presented before the society, and a vote of thanks was given the Chicago men.

There was a total of forty members and visitors present. The next meeting will be at Pleasant Hill, Thursday, July 28.

F. M. WELLS,  
Secretary.

### Personals

Dr. Ludvig Hektoen has been elected a member of the Norwegian Pathological Society in Oslo.

Mr. Charles W. Bergquist has been elected president of the Chicago Tuberculosis Institute.

Dr. Milton E. Bitter, Quincy, has been appointed physician for the Anna Brown Home.

Leroy Millner has been appointed superintendent of the Municipal Tuberculosis Sanitarium, 5601 North Crawford Avenue.

Dr. Karl M. Beck was appointed superintendent of the Lake County General Hospital, Waukegan, April 29, to succeed Dr. Charles Lieber, who has held the position for five years.

Judge Joseph B. David addressed the annual meeting of the Chicago Roentgen Society, May 12, on the "Roentgenologist in Court."

Dr. Frank N. Wells, Pittsfield, has been elected president of the Pike County Sanatorium Board to succeed Dr. Wesley W. Kuntz, Barry, resigned.

Dr. John Shutack, Joliet, has been appointed prison physician, to succeed Dr. William R. Fletcher, who recently became postmaster of Joliet.

Dr. Paul W. Wipperman, head of the Decatur and Macon County Hospital, Decatur, was re-elected president of the Hospital Association of Illinois, May 5.

Dr. Raymond V. Brokaw, for three years city health officer of Springfield, resigned, June 1, it is reported.

Dr. Lester E. Frankenthal has given \$1,195 to the University of Chicago to cover the cost of the obstetric and gynecologic library of Professor Fehling which has been conveyed to the university.

Dr. William H. Bishop was elected president of the Elgin Physicians' Club, May 9, and Dr. Milton Jacobs, secretary. Dr. Solomon Strouse, Chicago, addressed this annual meeting on "Diabetes."

Mr. G. Herbert Jones, director, Inland Steel Company, has given \$250,000 more toward the construction of the George Herbert Jones Chemistry Laboratory at the University of Chicago. Mr. Jones gave \$415,000 for the chemistry building last December.

The French government recently conferred the cross of officer of the Legion of Honor on Dr. Frank Billings, in recognition of his work in connection with the memorial to Pasteur to be erected in Chicago. Dr. Billings, it has been announced, will be the orator at the convocation of the University of Chicago, June 14; his subject will be "Medicine and Human Progress."

Dr. R. W. Dunham has tendered his resignation as Medical Director of the Oak Forest Tuberculosis Sanitarium, Oak Forest, Illinois, and has accepted the position of Medical Superintendent at the Ottawa Tuberculosis Sanitarium, Ottawa, Ill.

Dr. A. M. Saunders read a paper before the American Society of Clinical Pathologists on "The Changes in the Brain Structure and in the Blood Picture in Cases of General Paralysis Treated with Malaria." The society met in Washington, D. C., two days preceding the A. M. A. convention.

This issue of the JOURNAL carries the portrait of Doctor G. Henry Mundt, President of the Illinois State Medical Society, as a supplement.



## News Notes

—Winnebago County Medical Society published a bulletin, Vol. I, No. 1, recently announcing that their meetings this year so far averaged 65 members. The editor was too modest to give his name, but from the sample of his work, we bespeak a useful future for the bulletin. He must be some singer, too, as he closed with the song: "The Coat and Pants Do All the Work, but the Vest Gets All the Gravy."

—The U. S. Marine Hospital, 4141 Clarendon avenue, is being remodeled at a cost of \$184,000.

—The Illinois Society for Mental Hygiene has moved its office to 203 North Wabash avenue, room 1008, telephone State 4477.

—The Hospital Association of Illinois held its annual convention at the Hotel Sherman, May 5-6.

—At a meeting of the Rock Island County Medical Society, Fort Armstrong, May 10, Dr. Robert W. Keeton, Chicago, gave an address on "Feeding the Sick in Infections." There was a round table discussion on the control of obesity.

—At the May 20 meeting of the Chicago Gynecological Society, Dr. William B. Serbin read a paper on "Report of Three Hundred and Twenty Fetal Postmortems at the Chicago Lying-in Hospital," and Dr. Edward D. Allen, "Analysis of Thirty-two Cases of Ectopic Pregnancy and of Three Cases of Suspected Ectopic Pregnancy."

—The Medical Section of the American Life Convention held its seventeenth annual meeting at the Drake Hotel, May 4-6, under the chairmanship of Dr. Carl Stutsman, Des Moines, Iowa. Dr. Herbert M. Woolen, Indianapolis, president, American Life Insurance Company and of the American Life Convention, gave an address.

—At the clinical meeting of the Chicago Surgical Society, May 6, Research Hospital, University of Illinois, Dr. Dean Lewis, Baltimore, discussed "Pathologic History of Goiter"; Dr. Arthur Dean Bevan gave a clinic on cord tumors, and Jacob R. Buchbinder gave a preliminary report of a study on "The Prevention of Peritoneal Adhesions and Encapsulation."

—Dr. Hugo W. Traub, assistant professor of medicine, Northwestern University Medical School, gave a demonstration of a polycystic kid-

ney before the Chicago Pathological Society, recently; at the May 9 meeting of the society, among others, Drs. Ruth Tunnicliff and Harry L. Huber reported a case of granular bronchocardioidiasis; Dr. William F. Peterson and George Milles read a paper on "Chemical Alterations of Lymph in Bacterial Shock."

—A program has been arranged for the dedication, June 13-17, of the new buildings of Northwestern University Medical School on the McKinlock Campus, East Chicago Avenue near the lake. There will be alumni clinics in all the departments of the Montgomery Ward Memorial in the mornings. The Archibald Church Library and the Frederick Robert Zeit Museum of Pathology will be dedicated in the afternoon, June 15, and oil portraits of the founders of the medical schools—Nathan Smith Davis, William H. Byford, John H. Hollister, Ralph N. Isham and Davis Rutter—will be unveiled; also busts of Edmund Andrews, Robert L. Rea and others, and oil portraits of John Harper Long and Frank Billings. The alumni dinner will be that evening at the Congress Hotel. On the afternoon of June 16, the Robert L. Rea professor of anatomy will be installed, and the James A. Patten Research Laboratories of Bacteriology dedicated. In the evening Dr. Hugh T. Patrick will address a special convocation in the John B. Murphy Memorial Auditorium, and the following evening former governor Frank O. Lowden will speak at the general exercises in dedication of all the new buildings. There will also be special dedication programs for the new law and commerce schools of Northwestern, which are adjacent to the medical and dental schools on the McKinlock Campus.

—The Chicago Memorial Hospital, formerly at Cottage Grove avenue and Twenty-ninth street, opened its new hospital building at Lake Michigan and Thirty-third street on National Hospital Day, May 12, when a reception to friends, physicians and the public was given, and patients were received in the various departments. This is a five story structure with two basements and a foundation sufficient to accommodate twelve stories. The equipment is new and most modern, and the capacity about 100 beds. Sufficient funds were available to pay for the cost of the building, and the hospital's endowment amounts to about \$1,000,000. The new hospital offers complete facilities for the

diagnosis and treatment of disease, and a relatively new policy as regards the laboratory service in that it shall be available at all times as an integral part of the cost of service rather than on the basis of special charges for individual service.

—The Young Men's Christian Association dedicated its new ten-story professional building, Congress and Wood streets, May 29, which has been erected as a home for the medical, dental and pharmacy students in the various institutions in this great medical center. There are rooms for 348 students, with facilities for exercise and competitive games, and forty additional rooms for physicians and others engaged in post-graduate work, or who accompany patients to the hospitals. In the immediate neighborhood are Cook County Hospital, Rush Medical College, Presbyterian Hospital, Durand Hospital, University of Illinois colleges of medicine, dentistry and pharmacy and hospitals, and Loyola University colleges of medicine and dentistry and hospitals. Twenty-two members of the faculties are on the committee of management of this new institution, whose advantages are open to men of the community regardless of religious affiliation. The students themselves subscribed \$50,000 toward the building, the faculties and alumni \$150,000, Dr. Truman W. Brophy donated the site, and the remainder of the \$870,000 was advanced by the trustees of the Chicago Y. M. C. A. Physicians and other professional men are invited to the dedication, Sunday, May 29, and to inspect the building. The executive secretary is Mr. Lucius C. Hollister; the telephone, West 2660.

—President Mason announced, April 20, that Colonel and Mrs. Roberts had given \$1,000,000 through the medium of the Bobs Roberts Memorial Hospital for Children for charitable purposes, and that the children's hospital will be an addition to the University of Chicago clinics. About half of this sum will be used to build and equip the 100 bed hospital on a site at Fifty-ninth street and Drexel avenue; the remainder will be used for endowment. The new hospital will be a memorial to the son of the donors who died in 1917, aged 51½ years. This, with the Chicago Lying-in Hospital, whose affiliation was recently announced, will give the University of Chicago exceptional facilities for the care of

children and for research in children's diseases. The Bobs Roberts Memorial Hospital will adjoin the Chicago Lying-in Hospital, and will be intimately associated with the care of children born there; both will have free access to the facilities of the other university clinics. Construction is expected to start before the end of this year. Colonel Roberts is president of Miller and Hart, packers, located in the Union Stockyards.

—The entire collection of books and periodicals on surgery of the late Dr. Albert E. Halstead has been donated by his widow to Northwestern University Medical School; they will be installed in a seminar room adjoining the Archibald Church Memorial Library and will be known as the "Albert Edward Halstead Surgical Library."

—Dr. Benjamin Goldberg has recently been appointed as a member of the Board of Directors of the Municipal Tuberculosis Sanitarium. At a subsequent election of officers, he was elected Secretary of the Board of Directors.

As Secretary of the Board and the only medical member, Dr. Goldberg will have much to do with formulating the medical policies, both in the dispensaries and at the Sanitarium.

There are eight dispensaries, situated in the congested districts, with a total registration of 35,340 patients, and a staff of twenty-five physicians, ten dentists and one hundred and sixty nurses.

The Sanitarium proper is staffed by twelve physicians and sixty-nine nurses, and with the new addition almost completed, will have a bed capacity of over 1200.

In addition, there are fifty School Tuberculosis Physicians and fifty School Tuberculosis Nurses on the Sanitarium payroll, engaged in tuberculosis work in the schools.

—At a regular meeting of the Elgin Physicians Club held May 9, 1927, Dr. Solomon Strouse of Chicago gave a very instructive talk on "Diabetes."

The following officers were elected for the coming year: Dr. Wm. H. Bishop, president; Dr. A. J. Higgins, vice-president; Dr. Milton Jacobs, secretary; Dr. L. J. Hughes, program committee.

—The big annual picnic of the Adams County Medical Society will be held on Thursday, June



16, at Camp Irwin at Martindale, a few miles south of Quincy on the Mississippi. It will be an all-day affair with a chicken dinner served at noon, following which there will be an address by Dr. John R. Neal of Springfield, Illinois, Chairman of the Legislative Committee of the Illinois State Medical Society on "Legislative Problems" and by Dr. E. G. C. Williams of Danville, Illinois, on "Professional Collections." Every ethical physician in Central Western Illinois is cordially invited to be the guest of the Adams County Medical Society on this occasion.

—The reorganized staff of the Garfield Park Hospital, Inc., includes the following additions:

Medicine—Dr. Theodore Tieken, Dr. Clarence J. McMullen.

Surgery—Dr. Cassius C. Rogers, Dr. Frank D. Moore, Dr. Henry L. Baker, Dr. Leslie F. MacDiarmid.

Orthopedic Surgery—Dr. George H. Musselman.

Pediatrics—Dr. Craig D. Butler, Dr. J. C. Kraft.

Obstetrics—Dr. Carl Bauer.

Urology—Dr. Vincent O'Connor.

Dermatology—Dr. Erwin T. Zisler.

Neurology—Dr. Chas. F. Reed, Dr. A. B. T. Heym.

Otolaryngology and Rhinology—Dr. R. H. Good.

Ophthalmology—Dr. Robert VonderHeydt.

Pathology—Dr. Josiah J. Moore.

—At a meeting of the Staff of Post Graduate Hospital and Medical School held on April 14, 1927, the following officers were elected: President, Dr. C. J. Drueck; vice-president, Dr. B. C. Cushway; secretary, Dr. Hugo W. Traub.

## Deaths

HERBERT H. BALDWIN, Joliet, Ill.; Chicago Medical College, 1883; aged 69; died, April 16, at the Silver Cross Hospital, of suppression of urine following a cystostomy necessitated by carcinoma of the prostate.

MERRITT CALDWELL BRAGDON, Evanston, Ill.; Hahnemann Medical College and Hospital, Philadelphia, 1873; aged 77; died May 10; of pneumonia. He was a graduate of Northwestern University and a member of the board of trustees of that institution.

JOHN PAYNE BROWNE, Plainfield, Ill.; Medical Department of the University of Illinois, Chicago, 1905; a Fellow A. M. A.; for seven years president of the

school board; aged 62; died, May 3, of progressive muscular atrophy.

JOHN FRANKLIN CALDWELL, Beecher City, Ill.; University of Tennessee College of Medicine, Memphis, 1890; aged 73; died, April 15, of endocarditis and articular rheumatism.

NOAH ALLEN CROUCH, Assumption, Ill.; Washington University Medical School, St. Louis, 1896; died, May 1, at Decatur Hospital.

W. O. DENMAN, Greenup, Ill.; Eclectic Medical Institute, Cincinnati, 1874; aged 76; died, April 24, of myocarditis.

WILLIAM A. DRIVER, Chicago; Illinois Medical College, Chicago, 1909; aged 50; died, April 6, at the Providence Hospital, of injuries received in an automobile accident.

JAMES CLYDE ELDER, Chicago; Rush Medical College, Chicago, 1918; aged 45; died, April 17, at the Wesley Memorial Hospital, of glioma and cerebral hemorrhage.

JAMES P. ELLIS, Augusta, Ill.; College of Physicians and Surgeons, Chicago, 1890; member of the Illinois State Medical Society; formerly postmaster, police magistrate and mayor; aged 69; died, April 30, of acute edema of the lung.

VICTOR I. ENGLERT, Chicago; Washington University School of Medicine, St. Louis, 1906; member of the Illinois State Medical Society; aged 56; died, April 11, of chronic ethmoid and sphenoid sinusitis.

ALBERT F. FITCH, Chicago; Illinois Medical College, Chicago, 1902; aged 68; died, April 25, of lobar pneumonia and chronic myocarditis.

JESSIE MARGARET HORTON KOESSLER, Chicago; Rush Medical College, Chicago, 1904; aged 47; died January 29.

FRANK WARBLE LAMDEN, Chicago; Hahnemann Medical College and Hospital, Chicago, 1895; aged 69; died, April 12, of a skull fracture received in an automobile accident.

AMOS L. LENNARD, Chicago (licensed, Illinois, 1887); aged 90; died recently, of pleurisy, cerebral hemorrhage and arteriosclerosis.

HERMAN M. LUDWIG, Chicago; Bennett Medical College, Chicago, 1884; a Fellow A. M. A.; for many years on the staff of the Chicago Municipal Tuberculosis Sanitarium and formerly on the staff of the Frances Willard Hospital; aged 76; died, March 13, of myocarditis and nephritis.

ELLEN PARTRIDGE, Chicago; Northwestern University Woman's Medical School, Chicago, 1874; aged 80; died, April 10; of cerebral hemorrhage and lobar pneumonia.

TOMM PICKLES, Buncombe, Ill., (licensed, Illinois, 1889); aged 74; died, April 6, of cerebral hemorrhage.

EDWARD IRA POPE, Chicago; Washington University Medical School, St. Louis, 1881; on the staff of the American Hospital; aged 74; died, March 31, at the Presbyterian Hospital, of pulmonary embolism.

ELLIS H. SPARLING, Chicago; Chicago Homeopathic Medical College, 1884; aged 84; died, May 8, of carcinoma of the prostate gland.

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